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HOGOLOGY

INFORMATION

CONCERNING SWINE.

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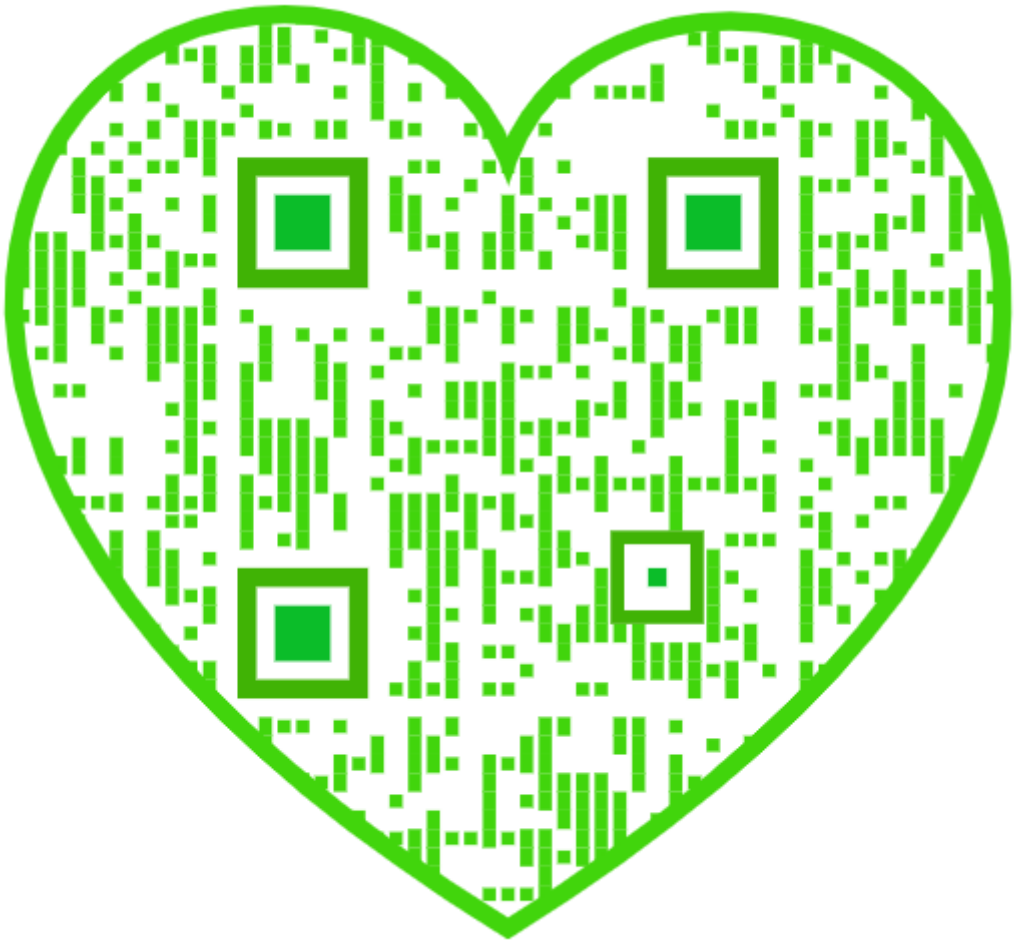

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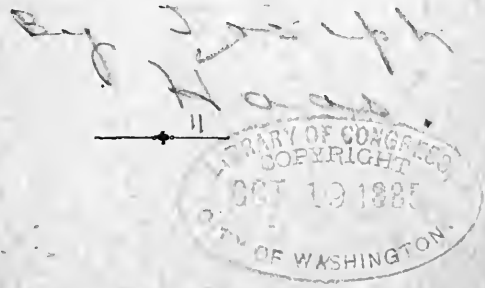

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INTRODUCTION.

There is nothing new under the sun. The following pages contain nothing that is new or unknown. The information given is compiled from various sources of authority. The aim of this pamphlet is to supply the farmer and others interested in swine facts concerning the breeding, feeding and treatment of the animal whose career is of vital importance to the pocket book and bank account of every American farmer.

A massive volume might be written concerning his hogship, but as few persons have the time or inclination to wade through hundreds of pages, the compiler hopes that this work, while it does not supply all the information that could be given or may be expected upon viewing the title, will create and foster an interest in the science of swine breeding, and stimulate the reader to pursue further the matters which are herein suggested and touched with a light hand.

The intention of this pamphlet, besides giving to the farmer items of information concerning other farm matters, is to place before its readers the experience and successful results of experiments made by its author (a veterinarian whose practice for many years has been mainly directed to the betterment of the condition of swine and the prevention and cure of their diseases), in the treatment of swine disease and its prevention.

As "the proof of the pudding is in the eating thereof," so in regard to this publication; if the recommendations it contains fail to appeal to the sober judgment of the reader as being based upon the highest of all sciences, viz, that of common sense, the work of preparation will have been in vain.

Value of the Swine Industry.

According to the National Department of Agriculture at Washington, D. C., there were in the United States on January 1, 1885, 45,142,657 swine, of the average value of $5.02, the aggregate value of the pork producing animal being $226,616,138.14. (See statistics on another page.)

It must be borne in mind, however, that at that season of the year (January) the swine in existence are principally young and of considerable less value, therefore, the enumeration, if taken in the months of October and November, would show a marked increase in number and value.

Yet, the above figures are sufficient to demonstrate what a great factor in the prosperity of the farmer is what may be properly termed the swine industry, for the breeding and feeding of swine is undoubtedly one of the chief industries of every well-ordered farm.

In earlier days, when the raising of swine was confined only to supplying the needs of the family of the farmer, the brood sow and her young family were treated with the same beneficent care that is now given to the milch cow or family horse. To-day the hog is a marketable commodity of greater value than the grain which constitutes its principal article of food, and in the hurry of feeding it up to a profitable weight for market its proper care and treatment is neglected to an extent sufficient to entail a loss, verified by statistics, of nearly *seven millions of dollars annually.*

The original hog was not fattened on corn or distillery slop. His living was obtained much after the manner of the human tramp or Sherman's bummers, he foraged for it. Trees, grasses, wild fruits and roots, formed his principal diet, it was "root, hog or die." No kind hand plowed the land, sowed seed tended the growing corn and distributed it when ripe two or three times daily to his hogship. But lacking luxuries he fortunately lacked the natural concomitants of a luxurious life, viz, easy subjectiveness to disease, or if he did, few were cognizant of the fact, because his value as an article of commerce had not been established. We have no time to waste upon him except to draw the inference that, as with man, the further he recedes, in the process of evolution, from his primeval ancestry and multiplies in numbers, the more is his healthy existence dependent upon the teachings of nature and science; the one to guide by observation to a knowledge of the causes of disease and error in treatment, and the other to assist nature in its herculanean task of resisting and driving back the diseases incurred by the neglect of the laws of nature.

SWINE STATISTICS.

The number of swine in the United States on the 1st day of January, 1885, as shown by statistics prepared by the United States Agricultural Department;

STATES AND TERRITORIES.	Hogs.	
	Number.	Value.
Maine	71,416	$627,747
New Hampshire	54,404	551,113
Vermont	74,115	619,601
Massachusetts	81,701	1,014,726
Rhode Island	14,840	166,802
Connecticut	62,406	619,068
New York	736,796	6,284,870
New Jersey	206,165	1,999,801
Pennsylvania	1,114 536	9,462,411
Delaware	44,431	364,334
Maryland	309,142	1,944,503
Virginia	795,687	3,421,454
North Carolina	1,432,599	5,787,336
South Carolina	567,181	2,348,129
Georgia	1,597,937	5,528,862
Florida	307,328	835,932
Alabama	1,351,752	4,580,405
Mississippi	1,224,388	3,979,261
Louisiana	563,874	1,877,700
Texas	2,233,081	8,128,415
Arkansas	1,659,181	5,574,848
Tennessee	2,021,568	8,126,703
West Virginia	416,133	1,739,436
Kentucky	2,052,665	9,709,105
Ohio	2,467,128	13,297,820
Michigan	849,174	5,154,486
Indiana	2,801,211	15,770,818
Illinois	4,090,681	21,435,168
Wisconsin	1,066,934	6,216,249
Minnesota	431,902	2,263,166
Iowa	4,800,998	26,741,559
Missouri	4,210,193	16,924,976
Kansas	2,208,911	13,673,159
Nebraska	1,679,200	10,495,000
California	978,665	5,676,257
Oregon	187,843	706,290
Nevada	14,256	95,943
Colorado	14,193	126,743
Arizona	9,853	62,074
Dakota	177,990	1,028,782
Idaho	26,762	240,858
Montana	19,298	189,120
New Mexico	24,988	177,415
Utah	26,242	243,526
Washington	63,599	489,712
Total	45,142,657	$226,401,683

Highest and Lowest Prices of Hogs for Twenty-eight Years.

The price of hogs and pork in the Chicago market during the month of January for twenty-eight years past.

HIGHEST AND LOWEST IN JANUARY.

Year.	Pork.	Hogs.
1858	$13.00—12.00	$4.00—3.25
1859	16.25—16.00	5.00—4.00
1860	15.75—14.50	5.25—4.60
1861	16.25—13.75	5.50—4.25
1862	9.25— 8.00	2.70—2.15
1863	14.00—10.75	4.30—2.75
1864	19.75—17.50	6.75—3.75
1865	38.50—32.75	12.75—9.75
1866	28.00—24.50	9.00—8.50
1867	19.00—18.00	6.50—5.40
1868	21.25—19.62	7.25—5.50
1869	31.00—27.00	11.34—9.51
1870	29 50—26.00	9.93—8.50
1871	23.00—18.37	7.16—6.26
1872	13.40—12.50	4.46—4.05
1873	12.00—11.35	4.12—3.40
1874	14.75—13.75	5.90—4.25
1875	19.00—17.70	7.55—5.25
1876	19.45—19.00	7.80—5.75
1877	17.95—16.40	7.25—5.65
1878	11.35—10.50	4.37—3.60
1879	9.57— 7.27	3.40—2.50
1880	13.62—12.20	4.95—4.25
1881	14.50—12.20	5.90—4.40
1882	18.50—16.60	7.35—5.80
1883	17.82—16.75	7.10—5.60
1884	16.35—14.20	6.75—4.95
1885	12.45—11.30	5.05—4.00

THE PRINCIPAL BREEDS OF SWINE OF THE UNITED STATES ARE:

Berkshire,	Yorkshire,
Poland-China,	Essex,
Duroc-Jersey,	Sussex.
Jersey-Red,	Woburn,
Chester-White,	Mackey,
Cheshire,	Byfield.

The six first mentioned breeds are predominant and the desire for their improvement has resulted in the formation of associations of swine breeders, having for members the leading breeders of hogs in the United States.

These associations register in their "records" the pedigrees of all thoroughbred swine of the particular breed from which they take their title, and furnish copies of the same at a small charge. Farmers desiring pure bred stock for breeding purposes will find it to their best interest to abandon inbreeding and close breeding and purchase boars and sows from breeders who can furnish reliable pedigrees furnished by these associations, which exist, not as money making institutions, but for the improvement of swine and the dissemination of information and the protection of farmers and swine breeders from bogus breeders, of whom there are a large number.

The method adopted by these bogus breeders is to travel over the country and take orders for pigs they do not own. They will take orders for pigs and guarantee them to be thoroughbred, and furnish written pedigrees a yard long. An instance has been given of one of these confidence operators taking an order for a Chester-White hog and purchasing a scrub white pig and shipping him to the trustful farmer who is unconscious of the fraud until the offspring appear, some of them spotted black and white. Another instance is given of a bogus breeder purchasing six pigs, the brood sow being white and the sire an Essex boar; three of them were as black as the ace of spades and three of them perfectly white. He shipped the white ones as thoroughbred Chester-Whites, and the black ones as pure Essex, and furnished pedigrees of his own manufacture. There-

fore all intending to raise pure bred swine only can best attain that end by refusing to purchase swine for breeding purposes from any one who can not furnish them with pedigrees certified by the properly authorized officers of the Record Associations.

The following is a general description of the prominent breeds, the names of the Record Associations, their executive officials and the standard of excellence adopted by them for the guidance of their members. The compiler of this pamphlet has no special or pecuniary interest in any of them, but believing that they are doing a grand work for the American farmer and swine breeder, and leaving the selection of breed to the reader, recommends him to support and further the interests of that association which exists for the development and improvement of the breed which is his own particular fancy, and the result will be healthier pork for the people and more money in the pocket of the breeder.

SWINE RECORD ASSOCIATIONS.

AMERICAN BERKSHIRE RECORD. — Phil. M. Springer, Secretary, Springfield, Ill. Fee for registering, $1.00.

AMERICAN POLAND-CHINA RECORD.—John Gilmore, Secretary, Vinton, Iowa. Fee for registering, $1.00.

AMERICAN DUROC-JERSEY SWINE ASSOCIATION.—Chas. W. Holmes, Secretary, Grinnell, Iowa. Fee for registering, $1.00; members, 50 cents.

NATIONAL CHESTER WHITE RECORD.—E. R. Moody, Secretary, Eminence, Kentucky. Fee for registering, $1.00.

CENTRAL POLAND-CHINA RECORD.—W. H. Morris, Secretary, Indianapolis, Indiana. Fee for registering, $1.00.

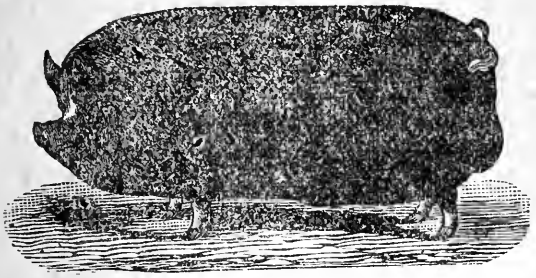
OHIO POLAND-CHINA RECORD. — Carl Freigau Secretary, Dayton, Ohio. Fee for registering, $1.00.

NORTHWESTERN POLAND-CHINA RECORD.—J. O. Young, Secretary, Washington, Kansas. Fee for registering, $1.00.

CHESHIRE SWINE BREEDERS' ASSOCIATION.—Gilbert S. Button, Vice-President, Chittenango, N. Y. Fee for registering, $1.00.

National Association of Jersey-Red Swine Breeders.—Clark Pettit, Secretary, Salem, New Jersey. Fee for registering, $1.00.

GENERAL DESCRIPTION OF BERKSHIRE SWINE.



The Berkshire is one of the oldest breeds. Formerly it was distinguished by its reddish color with small black spots. It was improved by the early introduction of Chinese and Siamese blood, and since 1839 by an infusion of Neapolitan blood; the latter cross has produced the fine hair and pliable skin of a rich plum color which is now a noticeable characteristic of the modern Berkshire.

Color.—Black with white on feet, face, tip of tail, an occasional splash of white behind the fore leg, and sometimes a small white spot on some other portion of the body; white upon one ear, or a bronze or copper spot on some part of the body does not argue impurity, but is discouraged by the best breeders. (Other markings suggests impurity.)

Face.—Short, fine and well dished, broad between the eyes, ears erect, small, thin, soft and showing veins.

Jowl.—Full; not deep.

Neck.—Short and thick.

Shoulders.—Short from neck to middling, deep from back down.

Back.—Broad and straight, or very slightly arched.

Ribs.—Long and well sprung, giving rotundity of body.

Hip.—Good length from point of coupling to tail.

Hams.—Thick, round and deep, holding their thickness well back and down to the hocks.

TAIL.—Fine and small, set on high up.

LEGS.—Wide apart, short and fine, but straight and very strong, with hoofs erect.

SIZE AND LENGTH.—Medium.

BONE.—Fine and compact.

OFFAL.—Light.

HAIR.—Fine and soft; no bristles.

SKIN.—Pliable.

The promoters of this breed claim that they are hardy, prolific, excellent nurses, active and furnish excellent meat for smoking, producing good hams, shoulders and bacon. One of the most prominent breeders of several kinds of swine says he prefers the meat of the Berkshire for his own family use.

Advocates of rival breeds, however, claim that they are objectionable because of their restlessness when in the field, inclining them to be breachy and hard to fatten, and slow of growth, on account of their activity, and that they are deficient as lard producers. Yet, on account of their upright ear, quick eye, firm nerve and activity, they are excellent to follow cattle, it being almost impossible for them to be hurt by the horns of the cattle.

If closely confined and well fed, they grow rapidly and fatten easily.

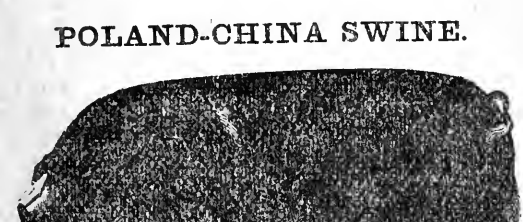
STANDARD OF EXCELLENCE

Adopted by the American Berkshire Record Association.

Color, black, with white on feet, face, tip of tail, and an occasional splash on the arm, 4; face and snout short, the former fine and well dished, and broad between the eyes, 7; eye, very clear, rather large, dark hazle or gray, 2; ear, generally almost erect, but sometimes inclined forward with advanced age, medium size, thin and soft, 4; jowl, full and heavy, running well back on neck, 4; neck, short and broad on top, 4; hair, fine and soft, medium thickness, 3; skin smooth and pliable, 4; shoulder, thick and even, broad on top, and deep through chest, 7; back, broad and straight, ribs well sprung, coupling close up to the hips, 8; side, deep and well let down, straight on bottom line, 6; flank, well back and low down on leg, making nearly a straight line with lower

part of side, 5; loin, full and wide, 9; ham, deep and thick, extending well up on back, and holding thickness well down on hock, 10; tail, well set up on back, tapering and not coarse, 2; legs, short, straight and strong, set wide apart, with hoofs erect and capable of holding good weight, 5; symmetry, well proportioned throughout, depending largely on condition, 5; condition, in good, healthy, growing state, not over-fed, 6; style, attractive, spirited, indicative of thorough breeding and constitutional vigor, 5; total, 100.

POLAND-CHINA SWINE.



The Poland-China hog originated in southwestern Ohio, the common stock being its basis, crossed with the China, Russia, Byfield, Poland, Bedford, Big China and others, between 1815 and 1835. Afterwards the product of these crosses were crossed with the Berkshire and Irish Grazier. The white color in the present standard breed evidently originated from the China, Byfield, Bedford, Russia and Irish Graziers, and the black from the Berkshire, or possibly from the Essex, during the earlier efforts made by the sturdy farmers of the Miami bottoms to establish a breed of swine which should prove practical and profitable. The outcropping of red comes, probably, from their cross with the Poland, or maybe the Jersey Red. During the last forty years there have been no further attempts to introduce new blood, and to-day the Poland China swine are a standard breed, transmitting their characteristics with certainty and uniformity.

The characteristics of this breed are described as follows:

COLOR.—Spotted, but fancy of the breeders has varied it from nearly white to almost or entirely black, the dark colors having preference.

SIZE.—They have long, deep bodies, straight or slightly arched backs.

HAMS.—Large and full, holding their size low down and lapping over the hock.

SHOULDERS.—Broad and deep.

CHEST.—Capacious.

FLANK.—Low.

MUZZLE.—Fine.

EARS.—Small, fine, thin, silky and drooping.

NECK.—Short, full, high crested.

JOWL.—Heavy.

LEGS.—Short, tough, medium-sized, well apart, terminating in fine, tough feet.

HAIR.—Fine, usually straight, although sometimes a little wavy; no bristles.

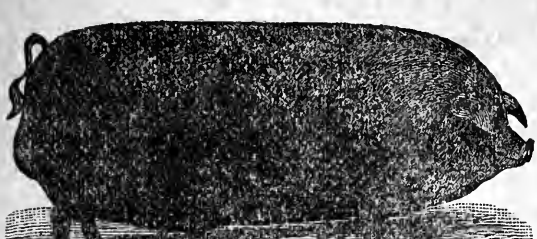
They are active and vigorous, prolific breeders and good nurses; have fine fattening qualities at all ages.

STANDARD OF POLAND-CHINAS.

American Record.

Color, dark predominating, 3 per cent.; head short, small and wide between the eyes, 8; ears, fine, silky and drooping, 3; neck, short and slightly arched, 3; jowl, large and neat, 3; shoulder, broad and deep, 8; heart, girth large and full, 10; ribs, well sprung, 8; back, straight or slightly arched, 8; sides, deep, 8; loin, wide and full, 10; flank, well down, 3; belly, wide and straight, 4; hams, broad, deep and well down on hock, 12; legs, short, pastern short and standing well on toes, 5; tail, tapering and not coarse, 2; hair, fine and thick, 2; total, 100.

JERSEY RED SWINE.



The origin of the Jersey Red is not positively known. They have been carefully bred in New Jersey for fifty years, and now extensively bred in New Jersey, Virginia, Kentucky and in some parts of the Western States.

These hogs are supposed by some investigators to have descended from the Polish or Podolian hog of Continental Europe, and were imported to America by the Dutch settlers of New Jersey and New York. Their appearance answers completely the description given by Albert Thaer (a celebrated German Agricultural writer) of the Polish hog, common in Germany in 1800 and later. Some persons suppose them to be descendants of the old Red Berkshire, but they more nearly resemble the Polish hog.

New Jersey breeders, and those of other States who desired to perpetuate what they believe they possess, viz: the improved genuine Jersey Red, met in Camden, New Jersey, on January 31, 1885, and organized the National Jersey Red Swine Breeders' Association, and decided that none but the offspring of stock recorded prior to March 1, 1885, should be eligible to record.

The general description of these hogs is that they are good feeders, large size, strong constitution, of docile disposition and rather sluggish; they are prolific breeders, fair nurses and fatten readily. The advocates of this breed claim that they are less liable to disease than any others. It is certainly true that they have many valuable qualities, as well as some that may be viewed as undesirable, but the former undoubtedly outweigh the latter so greatly that their

unfavorable qualities are not worth considering. The improvement of the breed, however, has almost, if not quite, obliterated these unfavorable qualities possessed by the original stock.

As an evidence of their fattening qualities it may be stated that during the winter of 1884-'85, of forty hogs slaughtered by two breeders of the common Jersey Red, at the harvesting of the New Hanover (N. J.) pork crop, the average dry weight was 824 lbs., three of them being over 1,000 lbs. each.

Standard of the National Association of Jersey Red Swine Breeders.

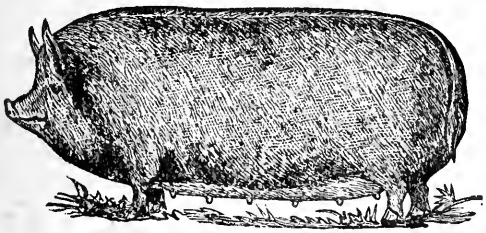
The improved Jersey Red Swine should be of good medium length, on fine symmetrical legs, with straight or slightly roached backs, well-sprung ribs, deep bodies and large development of hams; should evince great constitutional vigor and feeding capacity, with sufficient growth to insure with good care a net weight of 300 to 350 lbs. at 9 months old; or 600 to 700 lbs. per hog at 14 to 17 months of age: faces short and wide between the eyes; ears thin and pendant or wilted, and covered with fine, silky hair; tails large at base and tapering finely to the end; hair moderately fine without bristles, and of medium bright red color without markings.

Standard of the Duroc-Jersey Swine Association.

A Duroc-Jersey should be moderately long, quite deep-bodied, not round, but broad on the back, holding the width well out to the hips and hams, the head should be small in proportion to the body; the face slightly dished, nose rather short; ears medium in size, pendant, and falling toward the eyes, and must not be erect. The neck should be short, deep and thick. The legs short, wide apart and well set under the body. Bone of medium fineness, arm large, and flank well down. The hams should be broad and full, and well down to the hock. Tail large at its base, and tapering to its extremity. There should be a good coat of hair of medium fineness, usually straight, but in some cases wavy, with

few, if any bristles at the top of the neck and shoulders. The color should be red; varying from dark, glossy cherry, to light or yellowish red. An occasional fleck of black (usually on the belly and legs) is admissible, but cherry red without black, is preferred. In disposition mild and gentle. Pigs at nine months of age should dress 250 to 300 pounds, and when fully matured, from 400 to 700 pounds.

CHESHIRE SWINE.



The Cheshire was originated over thirty years ago in Jefferson County, New York, by D. J. Clark. It was a cross between the English Cheshire and Yorkshire, both imported animals. By carefully selecting and carefully breeding, a valuable breed has been established. They are white in color, very quiet and docile, a fast grower, reaching the weight of 350 pounds at eight months when well fed. They are very prolific, excellent mothers, and will breed in a more fleshy condition than any other breed. They have been bred so thorough that a sow of any other breed, such as Poland-China, Berkshire, Essex or Jersey Red, when crossed with a Cheshire boar will invariably have a pure white brood. Messrs. Clark & Green exhibited some Cheshire at St. Louis, in 1870, where they were awarded the Pork-packers' prize of $500. There was a register started for this breed in 1883, and the following standard was adopted: Head, short to medium, short in proportion to length of body; face, somewhat disheda nd wide between the eyes; ears small, fine, erect, not foxy, and in old animals, slightly pointing forward; neck, short; shoulders full, and hips broad; body, long, broad and deep; hams, broad, nearly straight with back and running well down toward the hock; tail, small and thin;

legs, small and slim, set well apart and supporting body well on the toes; hair, medium in thickness, and fine; color, white; size, medium; when well grown and fattened will dress from 550 to 700 pounds; will do well on grass. The Live-Stock Journal of Chicago, says they are the best of the white hogs, having a thin rind and solid meat; are not so liable to mange and other skin diseases as other white hogs.

THE CHESTER WHITE.

The Chester White breed originated in Chester county, Pennsylvania, and is supposed to have been produced by a cross of the Bedford upon the common stock of the county, the first pair of Bedfords being imported from Bedfordshire, England, in 1818, by Capt. James Jeffries. By careful selection and judicious crossing for a number of years, the Chester county farmers have produced the present valuable, well-formed, good-sized, easily-fattened hog, which transmits its qualities as uniformly as other well recognized breeds. The general description of this breed is as follows:

HEAD.—Short and broad between the eyes.

EARS.—Thin, projecting forward, and drooping.

NECK.—Short and thick.

JOWL.—Large.

BODY.—Lengthy and deep.

LEGS.—Short and well set under; fitted for bearing heavy weight.

HAIR.—White and generally straight, although it is sometimes wavy; no bristles.

TAIL.—Small.

They are docile, prolific breeders, good nurses, and of good constitution.

"NIP" AND "TUCK."

At the Wichita, Kansas, Fair, the Treasurer of the Association, Mr. R. E. Lawrence, exhibited two fat pigs which had been fed with a view to determine which one did the best. The feeding experiment lasted sixty days, the pigs being weighed August 4th at the commencement of the experiment, and again October 1st at close of same. One of these pigs was a Poland-China, bred by J. C. Hyde, which weighed at the beginning of the experiment 96 lbs., and at the end 176 lbs., it having been fed 57 days and made a gain during that time of 82 lbs., consuming in the mean time 3 lbs. of feed to 1 lb. of flesh made. The other pig was a Berkshire, bred by D. L. Miller, which weighed at the beginning of the experiment 81¼ lbs., and at the end 164 lbs., being fed 57 days and gaining 82¾ lbs., and consuming 3.18 lbs. of feed to 1 lb. of flesh made. It will be seen that the Berkshire gained in 57 days three-quarters of a pound more than the Poland-China.

BREEDING.

Select a sow from a large even litter, one of good length, large development of hind quarters, short, broad face, drooping or wilted ears, covered with fine silky hair, good broad back, with a slight inclination to roach, and prefer having her one year old when her first litter is dropped, although fine litters can be had from younger ones. Sixteen weeks before you wish the litter farrowed mate her with a broad faced, heavy, compactly-built boar of great vigor, on short, symmetrical legs—aiming to have him combine all the desirable points of an extra feeding hog. One service is amply sufficient. The sow is now given liberal treatment, and furnished as great a variety of food as your resources will admit of—such as slops made of bran or middlings, in addition to a small allowance of corn, with clover, hay and roots, and abundant exercise in winter, or a run to clover in summer, when corn is omitted. Ten days before she is to farrow, in cold weather, quietly separate her from the herd, and give her good, comfortable private quarters, with a moderate amount of dry cut wheat straw for bedding, in a shed with warm south-

ern exposure. Now feed with a view to keep her system loose and open—thus avoiding a feverish and restless condition in farrowing—reducing the quantity gradually a short time before farrowing, in which you will find but very little risk when the proper precautions have been taken to secure the above conditions beforehand. As a rule, it seldom pays to disturb them while farrowing, unless the weather proves very inclement, when it is best to cover the mother with a blanket, and remove the pigs as fast as delivered to the fire, and feed a little sweetened milk with a few drops of whisky added, until all are farrowed and dry; then return them quietly to the nest; they then seldom need any further care or attention save what the mother gives them. Give the sow a little aired water and clover only *for the first twenty-four hours*, then a little thin slops, made of ground oats and bran, with a few roots, which allowance should be increased daily, until at the end of one week she has all she will eat with avidity, coupled with a run to grass (clover preferred) when ever practicable, daily—leaving the pigs in the end meanwhile, where they may be treated to an allowance of sweet milk and a little meal until three weeks old, when they should have a corner divided off inaccessible to the sow, where they should regularly be fed milk or other rich slops and soaked corn. Any tendency to scour may be checked by changing the sow's feed, and lessening the quantity of theirs. Fed thus carefully they readily weigh from 50 to 65 lbs. each when eight weeks old, when they should be gradually weaned in from three to five days, and then get their entire sustenance from the trough; and the sow, if proven a satisfactory breeder, returned to the hog for another litter.

Again, swine of various ages and conditions should never be herded and fed together, as is too often the case, but should be divided according to age and condition, or else furnished with feeding apartments so constructed as to admit of the younger and weaker ones having access to troughs that can not be reached by the more robust ones; these latter can take ample care of themselves at a trough common to all. By observing these general hints, coupled with each feeder's

own experience and observation, put into practice, and a due regard to the securing of suitable annual crosses of fresh and vigorous blood into his herd, which will constantly improve and secure to him a fair percentage of profit at even the late low prices of pork; while he who has followed the almost universal practice of neglecting his stock in times of depression and allowing both quality and numbers to depreciate, will undoubtedly now have ample time and cause to bemoan his misfortune in having his pens depleted of stock at a time when he should be prepared, like his more shrewd and far-sighted neighbor, with well-filled pens of No. 1 stock, to take advantage of the reaction in prices already commenced, and which promise continued growth for some time to come.

Most Desirable Time for Pigs to Come.

The most desirable time to have pigs come is in the months of March or April and in the fall months of September and October. Pigs coming in March escape the most stormy season, and if of an early maturing breed may be killed at nine to eleven months old, saving their owners the expense of wintering and keeping until the next spring. Such pigs, if well bred, should weigh from 175 to 225 pounds net.

Pigs coming in September or October are strong enough when the winter sets in to stand tempestuous weather, if properly cared for, and may be slaughtered in the November or December of the following year, and may be estimated to weigh at that time from 300 to 350 pounds.

Feeding and Fattening Economically.

Swine, true to their natural instincts, will ramble, and the habit can not be eradicated. Exercise to them is a necessity. The most successful breeders of the United States give their hogs a large range of pasture at all times during mild weather, and haul and scatter over the ground during the fattening season a supply of corn and vegetables, taking care never to feed more than once in the same spot. They claim that the hogs fatten as rapidly as when confined in pens, and by the use of regular preventives do not so readily fall victims to disease. In the winter time

they should have shelter provided against inclement weather, and ready access to pasturage.

They will fatten better in mild weather or in comfortable winter quarters than when exposed to sudden changes of weather without shelter.

The object of feeding swine is not to see how much food can be disposed of, but to produce and maintain, at the least possible expense, an animal for converting grain and grasses into merchantable pork, lard and bone, at the same time preserving and improving the general health of these money-making machines, so that they may reproduce their species in form and quality as good as, if not better than, themselves.

In feeding stock for market it is highly necessary to observe the rule of nature that the preservation of life depends upon maintaining normal heat. Every effort must be directed to this end. This accomplished, the fattening will usually result as night follows day. Growth is the consequence of the food given or taken in excess of that necessary to sustain the proper temperature. Let, however, the normal temperature be changed several degrees and continue for any great length of time and death will certainly follow.

Now, farmers do not usually raise pork for the "fun of the thing," but because they can obtain a greater price for their corn and vegetables in the shape of pork than in their cereal form. Therefore, the economical use of the grain and grasses used for food is a vital question to the farmer and feeder.

An authority on live stock once observed: "It is expensive to attempt to keep animals warm while exposed to wintry blasts: in other words, to *warm the winter air* by means of fuel fed to the animals."

The sum of the whole matter then is: What amount of grain can be saved by properly sheltering swine in wintry and inclement weather? It is a well-known fact that all animals eat more food in winter than in the mild season, and that food which is of a heat producing nature. Now, it is self-evident that if hogs exposed to a temperature of 20° above zero are compelled (to sustain life) to each eat five pounds of corn daily, and hogs sheltered where the temperature is 60° above zero each eat but 3¼ pounds per day to

supply that necessary to life, then the neglect to properly shelter and warm the sheltering places is a loss of $1\frac{3}{4}$ pounds of corn per day in the effort to sustain life, or an actual loss of $1\frac{6}{10}$ cents per day (at 50 cents per bushel) each hog, equal to the loss of one bushel per month per hog, or 10 pounds of pork per month each hog. The farmer or feeder can multiply for himself the loss according to the number he owns. Besides loss of grain or pork (for one represents the other in this case) insufficient shelter retards fattening and increases labor in caring for the swine, and what is still more disastrous, they are carried off by lung and throat diseases, which are generally incurable, because the symptoms do not discover themselves until too late for remedies to be applied with success. In-bred hogs more easily fall victims to diseases occasioned by exposure to inclement weather than do those which are bred upon the principles followed by successful breeders.

The following table will illustrate the foregoing remarks, and is based upon the theory, that with the air at an average temperature of 70° above zero a hog weighing 200 pounds will require three pounds per day of corn, or its equivalent in other food, to maintain its weight and condition:

CORN OR ITS EQUIVALENT NECESSARY EACH DAY TO SUSTAIN HOG LIFE.

Degree of Temperature.	Pounds of Corn.	Value at 50 cents per bushel.	Money loss where temperature is less than 50°.	Loss per month each hog.
—10°	7½	6¾ cts.	3¾ cts.	$1 12½
Zero	6¼	5½ cts.	2½ cts.	75
10°	5½	4¾ cts.	1¾ cts.	52½
20°	5	4¼ cts.	1¼ cts.	37½
30°	4½	4 cts.	1 ct.	30
40°	4	3½ cts.	½ ct.	15
50°	3½	3 cts.	. . . . .	. . . .
60°	3¼	2¾ cts.	. . . . .	. . . .
70°	3	2½ cts.	. . . . .	. . . .
80°	2¾	2½ cts.	. . . . .	. . . .
90°	2½	2¼ cts.	. . . . .	. . . .
100°	2¼	2 cts.	. . . . .	. . . .

From the above table it can be easily ascertained what it costs in food to supply the heat necessary to sustain animal life at any temperature. All food fed beyond the above goes to forming fat, and by the use of the above table, and a previous weighing of each hog, the feeder can estimate the condition of his hog crop.

Comparative Value of Foods as Flesh-Formers and Fat-Formers.

It is as necessary to the business of the successful feeder and breeder to know what to feed as much as it is how to feed. Healthy and profitable hogs to become such must be built up like a house is on a foundation strong enough to sustain the layers of material put upon it. You can build fat upon bone and muscle, but can not put bone and muscle upon fat. The best and strongest houses are those in which the bricks are bonded in alternate layers of lengthwise and endwise. The best pork and the healthiest hogs are those which have a reasonable amount of lean and are not overwhelmingly fat. The major portion of the pork raised in the United States is exported to countries where fat meat is preferred. The use of pork in American families is not as large as it was years ago, according to the ratio of population, and the reason is easily found in the fact that too much attention has been paid to raising hogs for their fat and lard for the foreign market, and consequent neglect of the domestic preference for pork of a more meaty nature.

The raising of meaty hogs, or hogs whose proportion of fat will correspond with the lean, can be carried on with returns as profitable as the raising of fattened hogs, and the market for them can be reached without shipping to a distance of hundreds of miles.

On the other hand, if the reader prefers to raise fat hogs, the following tables will advise him which is the best food wherewith to build up the fat. If he carries out this preference, let him however not neglect to first lay a good foundation of bone and sinew, the food for which is also indicated on next page.

1. Roots and Tubers.	Water.	Flesh Formers.	Fat Formers.	Accessories or Heat Giving.	Mineral Waste.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Potato	75.2	1.4	18.9	3.6	0.9
Carrot	87.5	0.6	6.6	4.3	1.0
Parsnip	82.1	1.2	7.0	8.7	1.0
Jerusalem Artichoke	76.0	1.0	18.8	2.7	1.5
Long Red Mangolds	85.2	0.5	9.8	. . .	4.5
Short Red Mangolds	84.7	0.4	12.0	. . .	3.8
Orange Globe Mangolds	86.5	0.4	10.2	. . .	2.9
Silesian Mangolds	82.0	0.9	13.6	0.4	3.1
White Turnips	90.1	1.0	4.0	4.0	0.9
Swedish Turnips	87.1	1.3	5.3	5.3	1.0
2. Cereals and Leguminous Seeds.					
Wheat	14.3	14.7	66.4	3.4	1.2
Corn	15.0	11.0	66.7	5.3	2.0
Rye	13 0	14.3	55.8	14.8	2.0
Barley	13.9	13.0	52.0	16.9	4.2
Oats	14.0	18.0	51.1	14.7	2.2
Buckwheat	14.0	9.0	52.1	23.3	1.6
Peas	14.2	23.1	41.9	18.5	2.3
Beans, field	14.9	24.0	39.7	18.2	3.2
Beans, kidney	15.0	23.9	39.3	18.3	3.5

By reference to the preceding table and a recollection of the constituents of the body of the hog, every breeder and feeder of hogs can form a plan of profitable and economical feeding

The constituent parts of the body of the hog are approximately as follows:

Water	36.00
Fat	48.00
Ash	2.50
Proteine	13.50
Total	100.00

The comparative table above, showing that the Jerusalem artichoke and potatoes contain about 75

per cent. water, demonstrates that swine which are fed those articles require less water than when fed with corn, peas, oats and similar food; and when fed cereal or leguminous food require a plentiful supply of pure water to keep up the supply of water in the system. The tables show that corn and wheat are the best fat formers, and peas and beans the best flesh formers; that buckwheat, peas and beans give the most heat, and wheat, corn, turnips and potatoes the least. They also demonstrate that the roots and tubers are the best food to be given when cooling foods are a medical necessity. The inference is that roots and tubers and peas and beans are the best summer foods and the cereals the best foods for fall, winter and spring, or for fattening purposes.

COMPARATIVE DIFFERENCE AS TO THE VALUE OF FEED FOR STOCK.

Careful experiments in France and this country show the following relative values of the different kinds of feed for stock:

ONE HUNDRED POUNDS OF GOOD HAY EQUAL TO

	Lbs.		Lbs.
Green Corn	275	Rye	54
Rye Straw	442	Wheat	46
Wheat Straw	360	Oats	59
Oat Straw	164	Peas and Beans mixed	45
Barley Straw	180	Buckwheat	64
Pea Straw	153	Corn	57
Buckwheat Straw	200	Acorns	68
Raw Potatoes	201	Wheat Bran	105
Boiled Potatoes	175	Rye Bran	109
Mangel-Wurzels	339	Wheat, Pea and Oat Chaff	167
Turnips	504	Rye and Barley mixed	179

NUTRITION IN FOOD.

The following is "Boussingault's Scale of Nutritive Equivalents," and shows how many parts of the various articles of food in common use it takes to be equal in nutrition to 100 parts of wheat flour:

Wheat flour	100	Rye	111
Wheat	107	Rice	177
Barley meal	119	Buckwheat	108
Barley	130	Maize	130
White haricots	56	Horse beans	44
Lentils	57	Peas	67
White garden cabbage	810	Potatoes	313
Dried garden cab. at 212°	83	Carrots	777
Oats	117	Turnips	1335

VALUE OF FOOD FOR DOMESTIC ANIMALS.

These figures give the number of pounds of any one substance to be equal to the quantity given of any other—the result of experiments:

	Pounds.		Pounds.
Good Hay	100	Peas	44
Good Clover Hay	95	Beans	46
Rye Straw	355	Rye	49
Oat Straw	220	Barley	51
Potatoes	95	Indian Corn	56
Carrots	280	Oats	59
Beets	346	Buckwheat	64
Ruta Bagas	262	Oil Cake	64
Wheat	43		

Artichokes as Hog Food.

From 1,000 to 1,500 bushels an acre may be raised with same labor and expense as an acre of potatoes. Planted four square feet to a hill they will yield about 900 bushels per acre.

If cut green the stalks make excellent green fodder for stock, but swine will eat the dry stalks. Cutting the stalks green reduces the crop of tubers about one-third.

The stalks can be used as fuel, and also as a litter for hog pens, when they make an excellent manure.

They cost little or nothing to raise, and the yield is not less than three times that of potatoes and may become equal to turnips at one-tenth the cost of cultivation.

As will be noted in foregoing tables they excel all other roots and tubers in fattening qualities.

They can be raised on any dry soil, and since tile-ditching is becoming universal, there is hardly a farmer in the United States who can offer an excuse for not raising them.

They cost less trouble than any other root crop to harvest and store. Freezing does not injure them, but all that are required for winter use should be dug before the ground is frozen, and they may be safely stored as potatoes are, in pits or heaps. They can be thawed after freezing before feeding, or may be preserved in sand. They are insect proof. Hogs thrive upon them as well as on corn, and some breeders maintain that stock hogs thrive better. The fact,

however, is well established that it is a food that is inexpensive and suitable for use in resting the digestive organs.

MONEY IN PIGS.

[Breeders' Journal.]

Did you ever sell any corn? If so, there is a certainty that you do not carry as much stock on your farm as it will feed. The way to grow corn is to manure the ground. A heavy coating of manure is a weather breeder for the corn, that is, the weather is very likely to be favorable to a good corn crop, if the ground is well manured and the seed of an early sort. Manure will not keep away frost, but it will crowd corn ahead so it will be put out of the way of frost. Manure can not be made on a farm without stock. Corn can be sold at a much larger price after made into pork than in the ear or bag. Not only the price obtained per pound for the pork made by the corn, but also the summer's growth of the pig can be figured as returns from the corn. If it was not for the corn it takes to ripen the hog, the price for the summer's growth upon the hog could not be obtained. Now is the time to provide a market for the next year's surplus corn crop. To do this, six or eight sows should now be selected; they do not need to be the best, or fat; they will make better breeders if they are not fat. The quality of them does not need to be the best; the best quality can be got in the boar, and he must be of the best sort; short legged, good back, full hams, short neck, short nose, thoroughbred; if the boar is first-class, the pigs will be like him if he is a thoroughbred hog. If the eight sows are all bred to this boar in January, the pigs will come in May on grass. A hog pasture (clover is the best) should be prepared as soon as grass starts in the spring. The breeding sows provided with rings in their noses and put in here, being careful to make the fence pig proof, or in other words, so the little pigs can not get out; three fence boards at the bottom and two barbed wires above them, will make a safe fence. The little pigs should be littered in this field. A larger per cent. will be raised and saved by the sows this way than by any other. A reasonable

estimate for these sows will be six pigs each, this makes forty-eight pigs. The pasture for these should be ten acres, worth a rent of $3 per acre, total, $30. What slop and milk can be spared should be mixed with ground corn and fed these pigs next summer, feeding them about one bushel each by October first, making them get most of their living off the grass. The pigs will then weigh 100 pounds each; put on to corn, then it will take one bushel of corn to make ten pounds of pork. After feeding ten bushels of corn each they should weigh 200 pounds each.

These 200 pounds of pork have cost eleven bushels of corn, and sixty cents each for pasture. If they are sold for five cents a pound, (there were times last fall when they would have sold for six cents) they would bring $10 a head; taking out their pasture they would realize $9.40 per head, for the eleven bushels of corn, or 85½ cents per bushel. The next 100 pounds of pork would cost ten bushels of corn, and would realize at least fifty cents per bushel, which is a profit of at least ten cents a bushel over the present price of corn.

It is not a difficult matter to raise pigs if they come in spring on grass. And it will be found more profitable to raise one litter of pigs a year and have others come in May. The sows can be put up and fed a full feed as soon as the pigs are weaned, and as they have flesh enough, sold. It is wonderful how much flesh a thin brood sow will put on as soon as her milk is dried up. And what a light expense for feed—if she is of the right breed. The sows that are to be bred the following year should be picked out from the young pigs, when the feeding for market commences, and put them by themselves growing but not fattened, and bred the following January, but to a new boar no relation to them. The boar after being used can be altered and fattened. In this manner of doing, there is only one sized lot of hogs for sale at a time. The brood sows are fattened and sold at one time, and the May pigs are all of a size and fattened and sold by themselves. The most profit can thus be got out of the hogs by having a system in their handling.

CASTRATION.

Male pigs are usually castrated at from two to six weeks of age. This operation improves the quality of the flesh and promotes the propensity to fatten.

The following is the simplest method of performing the

OPERATION.

The pig is laid on his left side and held by an assistant. The operator, standing at the back, grasps one testicle between the thumb and fingers of his left hand, and with a sharp knife makes a longitudinal incision in the bag large enough to press the testicle out through, when he grasps it with the left hand, and, by a backward scraping motion of the knife, severs the cord. The other testicle is then removed in the same way.

No further attention is necessary.

In castrating an old boar it might be well to tie a ligature around the spermatic cord just above the place it is to be cut across, so as to prevent any danger of bleeding. Let one end of the ligature be long enough to hang out, so that in sloughing off it will come away.

SPAYING.

Spaying is the operation of castrating females of any species of animals, for the purpose of increasing their size, hastening their maturity and causing them to fatten easier.

OPERATION.

The sow is placed on the left side, and an opening made through the right flank at a point a little below and a little back of the center of the flank. After making the incision, the ovaries may be felt by the operator, who, being placed at the back of the sow, introduces the front finger of the right hand. The right ovary will be felt a little down or inclining back of the incision, if made exactly in the proper place. If not, it must be searched for in other directions. When found, it is drawn out and cut off. The other is then found and drawn out and cut off. The whole or a portion of the womb may be drawn out in searching for the second ovary, but may be re-

turned with very little difficulty or danger, and the aperture stitched up with a curved needle.

For a few days after castration or spaying the animals should receive some extra care. Their food should be of a cooling character; they should be kept quiet, and in situations where they will not catch cold, and thereby produce inflammation. A little lard rubbed over the wound will assist the healing.

Sows should be spayed when from five to eight weeks old; it is not advisable to delay it until the sow has obtained frame. Cool weather in the spring or fall is the best time for either castration or spaying.

HOG LICE.

The hog afflicted with lice continually rubs and scratches himself, and wallows in the mire and dirt. Wallowing in the dirt is not as healthy a practice as is generally believed, and will produce malaria as readily as decayed vegetation. There are various remedies for this trouble. One is to take about half a pint of coal oil and mix it thoroughly in a bucketfull of water, and thoroughly paint the animal with the solution; or wash the animal with a medium strong lye from wood ashes; or a weak saleratus water, and then with a solution of lobelia. A common remedy is to boil tobacco in sufficient water to float it until the water is tobacco color, and while hot mix in lard enough to make a thin ointment; then, when cool, rub the animal thoroughly once, and the vermin will be speedily destroyed.

WHAT WILL PREVENT SOWS EATING PIGS.

Young sows will sometimes eat their offsprings from costiveness, which may be prevented by feeding some laxative food and rubbing the back of the pigs with an infusion of aloes. A breeder says the best means of prevention is to regulate the sows with Haas' Remedy and their appetites will remain normal and their habits regular, and feed them with bran-mash and potatoes or other cooling food.

IMPROVEMENT OF PIGS.

Give the pigs a chance, and do not expect them to root for their living through the summer and then fatten out into fine big hogs in the fall, which is one of the impossibilities. Continuous growth is necessary to make swine profitable, and this can not be obtained without plenty of feed. A little grain each day with good pasture will answer all the purposes and insure the pigs making a very rapid growth, and to insure them reaching full maturity, *see that they get* their full proportion of Haas' Hog and Poultry Remedy.

LOSSES OF STOCK.

Prof. J. W. Sanborn, of the Missouri State Agricultural College, and also Secretary of the State Board of Agriculture, estimates the losses of stock in that State during the last winter, from disease and exposure, at not less than four millions of dollars. The principal loss by diseases has been from cholera in hogs and from exposure from want of proper shelter. If these hogs had been treated with Haas' Remedies as a preventive, there is not the slightest doubt the farmers of Missouri would have saved the majority of those that fell victims to the disease.—*Exchange.*

Gross Error in Permitting Hogs to Eat the Carcasses of Other Hogs.

The hog is not a meat-eating animal, and if it were it stands to reason that diseased meat, especially of its own kind, would not be the healthiest food.

Many persons, through ignorance, permit their swine to eat the carcasses of their kind which have died from disease. These persons, however, are only partially to blame, because they have been instructed by quack veterinarians that if hogs eat the flesh of swine who were affected with disease they would thereby be protected from contagion.

If swine disease can be communicated by drinking from a stream down which dead hogs have floated, how much more readily will swine contract diseases if they eat the carcasses of their kind who have per-

ished from contagious diseases? The least harm that can be done will be to impair the digestive organs and render the flesh-eating hog an easier victim to malaria. Further, may we not reasonably suggest the presence of trichinæ spiralis in the hog to the eating of flesh containing these parasites.

RELATIVE VALUE OF MANURES.

The following table shows the relative values of decomposed vegetables as manures from the nitrogen they contain:

100 POUNDS OF BARN-YARD MANURE IS EQUAL TO

	Lbs.		Lbs.
Wheat straw manure	130	Fresh sea-weed manure	80
Oat straw manure	150	Dried sea-weed manure	20
Barley straw manure	180	Wheat or corn bran man	26
B'kwheat straw manure	85	Malt dust manure	13
Pea straw manure	45	Rape cake manure	8
Wheat chaff manure	50	Pine sawdust manure	250
Green grass manure	80	Oak sawdust manure	180
Potato tops manure	75	Coal soot manure	25

TO COMPUTE THE WEIGHT OF HOGS.

1. Measure the girth in inches back of the shoulder, and the length in inches from the square of the buttock to a point even with the point of the shoulder blade.

2. Multiply the girth by the length and divide the product by 144 for the superficial feet, and then multiply the superficial by 11, if the girth is less than 3 feet, or by 16 if over 3 feet, and the result will be the number of pounds of pork in the four quarters of the animal.

Example: What is the estimated weight of pork in a hog whose girth is 3 ft. 8 in. and length 3 ft. 10 in.?

Operation: 44 ins. girth $\times$ 46 ins. length $=$ 2024; 2024$\div$144$=$14 sq. ft. $\times$ 16$=$224 lbs. *Ans.*

Note—If the animal is lean and unthrifty, a deduction of five per cent. should be made from the above result.

Hogs Profitable as Manure Producers.

One hog, kept to the age of one year, if furnished with suitable material, will convert a cart-load per month into a fertilizer which will produce a good crop of corn.

A reliable authority estimates that twelve loads per year multiplied by the number of hogs usually kept by our farmers would make fertilizing substance sufficient to grow all the corn they eat; in other words, the hog will pay for its keeping in manure.

Farmers who carry out such economies as this can laugh at low prices for hogs, and never quit laughing when prices are high.

DISEASES OF SWINE.

Swine diseases have cost the farmers and feeders of the United States, during the past few years, money sufficient to have paid off the mortgages on their lands.

Investigations have been made into the causes, and the majority of opinions hold that the prime cause is malaria indigenous to the soil on which the hogs are raised. The disease may present itself in the form of coughing and thumping, lameness, staring hair, constipation, scouring, black or sheep droppings, scurviness, watering eyes and inflamed eyes, sniffling, gauntness and unthriftines, sluggishness, with disposition to keep the nest and to shun the light, excessive thirst or loss of appetite.

As with the human family, malaria in the hog is insidious in its approach; does not develop to the eyes until it has obtained a lodgment, and demands prompt measures to eradicate from the system.

The cause being found it is the duty of every farmer and feeder to use the best means to prevent and arrest disease in the hogs he raises, be they few or many.

It is a duty owing to himself and to society to raise healthy meat, knowing, as he should, that unhealthy animals can not become healthy food simply by the process of death.

SYMPTOMS OF DISEASE.

"The external symptoms are a dullness of the eyes, the lids of which are kept nearer closed than in health, with an accumulation of secretion in the corners. There is hanging of the head, with lopped ears, and an inclination to hide in the litter and to lie on the belly and keep quiet. As the disease ad-

vances, the animal manifests more or less thirst, some cough, and a pink blush, or rose-colored spots, and papular eruption appears on the skin, particularly on the belly, inside of the thighs and forelegs, and about the ears. There is accelerated respiration and circulation, increased action of the flanks in breathing, tucked-up abdomen, arched back, swelling of the vulva in the female as in heat; occasionally, also, of the sheath of the male, loss of appetite, and tenderness of the abdomen, sometimes persistent diarrhea, but generally obstinate constipation. In some cases large abraded spots are observed at the projecting points of the body, caused by separation and loss of the epidermis. In such cases a slight blow or friction on the skin is sufficient to produce such abrasions. In many cases the eruption, blush and spots are entirely absent; petechia are formed in only about one-third of the cases. In some cases there is considerable inflammation of and discharge from the eyes. Some animals emit a very offensive odor even before death. In large herds, where the disease prevails extensively, this offensive effluvia can be detected for a great distance to the windward. In nearly all cases there is a weakness or partial paralysis of the posterior extremities, and occasionally this paralysis is so complete in the first stages of the disease as to prevent walking or standing.

"As symptoms of special diagnostic value, which are scarcely ever absent in any case, the following are mentioned: Drooping of the ears and of the head, more or less coughing, dull look of the eyes, staring appearance of the coat of hair, partial or total want of appetite for food, vitiated appetite for excrements, rapid emaciation, great debility, weak and undecided and frequently staggering gait, great indifference to surroundings, tendency to lie down in a dark corner, and to hide the nose and even the whole head in the bedding, the specific offensive smell and the peculiar color of the excrements.

"If the animals are inclined to be costive, the fæces are generally grayish or brownish black in color and hard; if diarrhea is present, they are semi-fluid of a grayish-green color, and in some cases contain an admixture of blood."

The disease is often conveyed from the pens or herds of neighbors, or from running water which comes through the premises of those who have the disease, or even through the air from adjacent farms. Too great care can not be taken by any one whose herd has it, that it be not transmitted. Hogs turned out to pasture, especially before or after it is wet with dew or mild rains, seem to get it because the wafted material is more apt to alight and remain amid moisture. There are some remarkable examples of exemptions to herds whose owners have been skilled and consistent and exact in their precautions. Where a neighbor's herd is affected, in the opinion of most authorities, it is wise to treat adjacent herds with preventive measures and fortify their constitutions with invigorating and stimulating tonics.

RULES FOR TREATING DISEASES OF SWINE.

THE DON'TS.

1. *Don't* try to prevent disease by permitting the apparently well animals to eat of the carcasses of those which have died from the disease you seek to prevent spreading.

2. *Don't*, because they cost a few cents, dose your hogs with poisons like arsenic, copperas, saltpetre, hellebore, henbane, stramonium, antimony, belladonna, aconite, foxglove, strychnine, hemlock and carbolic acid. These poisons may be given in special cases by competent veterinary surgeons who know when and how to administer them; but in the hands of the unprofessional and fed indiscriminately they are deadly in their effect. Further, as traces of them have been found in pork direct from the butcher, it is evident they are detrimental to the life of the people who unconsciously partake of the products of hogs dosed with these poisons.

3. *Don't* wait until disease is on every side of your farm before you institute preventive measures.

4. *Don't* wait until your hogs are attacked and some of them die before you procure remedies for those sick and preventives for those that are apparently well.

5. *Don't* expect that the treatment given to the sick swine is going to prevent disease in those in whom it has not outwardly developed, and for whom no preventive measure are adopted. In other words, *don't* expect the medicine given only to sick hogs will prevent disease in hogs that don't get the medicine.

6. *Don't*, when directed to give certain quantities of remedies, try to save money by dividing the dose for one hog among five or ten of them. This method of deceit assuredly will be found out by the man you are injuring, and he won't thank you for your "penny-wise-and-pound-foolish" economy. The man you deceive most is yourself.

7. *Don't* stigmatize a remedy as "worthless" because it fails to save the hogs who were in the final stage of disease before it was given to them; or because it did not *prevent* disease in hogs to whom you did not feed it until they showed symptoms of disease; or when fed to hogs you might have saved you gave it in irregular and insufficient doses. You do not expect to raise fifty bushels of corn from an acre of ground when you plant only ten seeds to an acre, nor should you expect to cure or prevent swine disease with one-tenth the amount of remedy prescribed.

8. *Don't* expect a remedy prepared for the prevention of swine diseases to prevent hogs dying from the poisonous effects of arsenic, antimony, strychnine, and improper doses of carbolic acid. You might, with just as good reason, expect quinine to reset a broken limb, or sow wheat and look for a crop of corn.

9. *Don't* purchase remedies which are prepared by any other than regularly graduated veterinary surgeons; or are imitations or substitutes for well-known remedies; or are stated to be "*just as good*" or "*the same as*," because they are cheaper, for you may be sure that the dealer offering them to you makes a larger percentage of profit on the cheap substitute than he does on the original and genuine article. Cheap remedies are usually worthless and are made of inferior ingredients to those which are contained in *remedies*. It takes no stretching of the imagination to know this.

10. *Don't* inbreed or close breed your hogs. Such practices are contrary to natural laws, and the penalty of their infraction is weak constitutions in the descendants of inbred and close bred hogs.

HOW TO PREVENT AND ARREST DISEASE.

1. Prevention is better than cure.

2. Half measures add to expense and loss, and are, in the end, exasperating.

3. Keep your hogs in a healthy and vigorous condition, and if contagious diseases come into the neighborhood they will be the last attacked, the least hurt, and the least liable to succumb.

4. Purchase remedies only which have obtained reputation by years of successful use, and recommend themselves to your judgment by the treatment advised.

5. Always purchase remedies of which others are imitations, counterfeits and substitutes, for the reason that a remedy which is counterfeited is sure to be a successful one and profitable to use, or it would not be counterfeited, just as the genuine dollar bill or government bond are counterfeited, because they are valuable.

6. In selecting a remedy get the one which is universally endorsed, and when you get it, *follow the directions in all particulars.*

Beware of Ignorant Prescriptions.

[The *Drovers' Journal* of Chicago lately published the following sound words of advice concerning the ignorant and dangerous prescriptions that annually go the rounds of the agricultural press:]

"Free prescriptions, like free shows, are usually without merit, and in numerous instances are positively harmful.

"Many thousands of hogs have died a quick death, and the cause has been falsely attributed to hog "cholera," whereas the true cause was that, misled by the gratuitous advice of correspondents of county and agricultural papers, the farmers administered copperas and arsenic as sure cures for "hog cholera," and black antimony as a fattening powder. These

voluntary prescribers are certainly ignorant of the properties of these poisons, for we find the United States Dispensary says:

"Sulphite of iron (copperas) is an astringent and irritant. In large doses it is apt to produce nausea, vomiting, griping and purging, and its use, when long continued, injures the stomach. As its effect is chiefly that of an astringent it can not be used with advantage to improve the quality of the blood. Taken in an overdose it acts as a poison."

Regarding the effect of arsenic, the same authority says:

"Arsenic administered internally or applied externally acts with very great energy and generally destroys life in a short time * * * occasionally the symptoms have a perfect resemblance to Asiatic cholera in the stage of collapse. It is very rare to observe all these symptoms in the same individual or animal. Sometimes, indeed, they are nearly all wanting, death taking place without any pain or prominent symptoms.

"Arsenic may be detected in exhumed bodies long after death, and has been found in the brain of a body that has been buried years ago."

The same authority, which we may remark can be found in a drug store, says, concerning black antimony: "Antimony is a medicine of the greatest power of any known substance; a quantity too minute to be sensible in the most delicate balance is capable of producing potent effects. Antimony can not be relied upon for a definite effect, being sometimes mild and sometimes more active than might be desirable. It is not generally employed by physicians."

Prof. Ricord, of Paris, a celebrated chemist, after conducting a series of experiments, demonstrated that antimony was a complete failure as a curative agent, but a decided success as a specific irritant poison.

"Hog raisers will preserve their hogs and circumscribe the limits of sickness among pork eaters by rigidly ignoring these and similar cheap prescriptions, and use such remedies as specifics for swine diseases as are prepared by veterinaries who, by reason of their scientific training and practical experi-

ence, are better fitted to prescribe and prepare remedies than are newspaper correspondents, however well-meaning the latter may be.

"We are informed that Haas' Hog and Poultry Remedy is composed of such ingredients only as are the natural assistants of nature in its efforts to ward off disease, and judging from the numerous communications sent to our Letter Box, that it does all that is claimed for it."

TO MEASURE CORN IN THE CRIB.

This rule will apply to a crib of any size or kind. Two cubic feet of good, sound, dry corn in the ear will make a bushel of shelled corn. To get, then, the quantity of shelled corn in a crib of corn in the ear, measure the length, breadth and height of the crib, inside of the rail; multiply the length by the breadth, and the product by the height; then divide the product by two, and you have the number of bushels of shelled corn in the crib. To find the number of bushels of apples, potatoes, etc., in a bin, multiply the length, breadth and thickness together, and this product by 8, and point off one figure in the product for decimals.

HAY IN THE STACK.

To find the quantity of Hay in a Round Stack, terminating in a Cone: For timothy, square the diameter, multiply by 8, and that product by the height of the stack, reckoning up to one-third of the distance from where it begins to taper off to the top or apex; cut off the right hand figure, and divide by 75; the result will be in tons. Should there be a remainder, multiply it by 2,000, and divide again by 75; the quotient will be pounds. For clover hay, square the diameter, multiply by the height of the stack, as for timothy, and that product by 7; cut off three right hand figures, and all on the left will be tons; then multiply the figures upon the right by 2,000, cut off three from the right, and all on the left will be pounds.

NUMBER OF POUNDS IN A BUSHEL.

ESTABLISHED BY LAW IN THE VARIOUS STATES.

ARTICLES.	California.	Connecticut.	Dakota.	Illinois.	Indiana.	Iowa.	Kansas.	Kentucky.	Louisiana.	Massachu'ts.	Michigan.	Minnesota.	Missouri.	Nebraska.	New Hamp.	New Jersey.	New York.	Ohio.	Pennsyl'nia.	R. Island.	Vermont.	Wisconsin.
Barley	50	48	48	48	48	48	48	48	32	48	48	48	48	48	48	48	48	48	47	. .	48	48
Buckwheat	40	48	42	52	50	52	50	52	. .	48	48	42	52	52	. .	50	48	50	48	. .	46	42
Beans, white	. .	60	60	60	60	60	60	60	. .	. .	60	. .	60	60	60	. .	62	60	. .	. .	60	. .
Corn, shelled	52	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	58	56	56	. .	56	56
Corn, in ear	. .	. .	72	70	68	70	70	. .	. .	. .	70	. .	. .	. .	. .	. .	. .	70	. .	. .	. .	. .
Flax Seed	. .	. .	. .	56	56	56	56	56	. .	. .	56	. .	56	56	. .	55	55	56	. .	. .	. .	56
Grass Seed, clov'r	. .	. .	60	60	60	60	60	60	. .	. .	60	60	60	60	. .	64	60	62	62	. .	60	60
Grass Seed, timo.	. .	. .	42	45	45	45	45	45	. .	. .	45	. .	45	45	. .	. .	44	45	. .	. .	42	46
Oats	32	32	32	32	32	33	32	33¼	32	32	32	32	34	34	30	30	32	33	30	. .	30	32
Onions	. .	50	. .	57	49	57	57	57	. .	52	54	. .	57	57	. .	. .	. .	. .	. .	50	. .	. .
Parsnips	. .	45	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	60	. .	. .	60	. .	50	. .	. .
Peas	. .	60	. .	. .	. .	. .	. .	. .	. .	. .	60	. .	. .	60	. .	. .	60	. .	. .	. .	. .	60
Potatoes	. .	60	60	60	60	60	60	56	. .	60	60	60	. .	60	60	60	60	60	56	60	. .	60
Rye	54	56	56	56	56	56	56	56	52	56	56	56	56	56	56	56	56	56	56	. .	56	56
Sugar Beets	. .	60	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	50	. .	. .
Turnips	. .	50	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	50	. .	. .
Wheat	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	. .	60	60	60

QUANTITY OF HAY IN A MOW.

Multiply the length of the mow by the breadth, and that product by the height; divide by 600 for timothy, and 800 for clover; the result will be tons. To the remainder annex a cypher and divide by 3; the result will be pounds.

The following editorial appeared in the *Drovers' Journal* of August 7, 1884. Coming as it does from a newspaper of general circulation among breeders and feeders of live stock, and devoted entirely to their interests, it is entitled to the most careful consideration:

Fraudulent Veterinary Medicines.

Ever since the *Drovers' Journal* was established we have been importuned to admit to our columns advertisements of compounds called hog and cholera remedies. Our readers will give us the credit of believing that we have exercised a censorship over the advertising columns in the interest of our subscribers. We have repeatedly refused the use of this paper for the advancement of schemes of quacks and adventurers, notwithstanding the highly remunerative rates offered for the opportunity. In addition to the exclusion from this paper of advertisements of articles we believed to have been frauds, we have always considered it a duty to warn its readers against schemes directly aimed to entrap the unwary. It has again become our duty to exercise this high function of journalism by advising our readers to view with distrust the advertisements now going the rounds of the country press of imitations and substitutes for the well known Haas' Remedies, which have been advertised in the *Drovers' Journal* for years.

We have refused the insertion of advertisements of these imitations and substitutes for two reasons: First, because the Haas' Remedies are known by the feeders to be what they are represented, and are compounded by one of the leading veterinarians of the age, a graduate of the severest school of veterinary learning, the Berlin Veterinary College, a gentleman whose testimonials as to personal character and ability and to the efficacy and worth of his preparations

have convinced us of his merit and claim to the use of our columns. Second, because the substitutes claimed to be the same preparations, we judge them to be egregious frauds from the lack of medical reputation of the manufacturers, whose ability seems to be limited to imitations and counterfeiting of successful medicines. *The compounders of these imitations, as far as we can ascertain, have never graduated either as chemists or veterinary surgeons, but have filled laboring and clerical positions.* The breeder or feeder who would use their concoctions as substitutes for those prepared by a professional veterinary of wide celebrity, endangering his herds, exhibits less wisdom than the man who should employ a shoemaker to make his coat or a bricklayer to prescribe for the Asiatic cholera; for the shoemaker may have changed his occupation, and the bricklayer may have once had the cholera and prescribed the remedies which saved his life; but these charlatans and impostors, as far as we can gather the information carefully sought for, have never dissected a hog or any other animal, nor treated as veterinary surgeons, a horse or a cow.

Stock feeders of all classes will always be on the safe side when they use established and successful remedies, prepared by regular practitioners, which are indorsed by their fellow feeders, and ignore the plausible representations of firms and individuals who aim for the almighty dollar without offering a fair equivalent.

CONTENTS OF CISTERNS.

The following gives the contents of circular cisterns for each foot in depth:

Diameter.	Barrels.	Diameter.	Barrels.
5 feet	4.66	8 feet	11.93
6 feet	6.7	9 feet	15.10
7 feet	9.18	10 feet	18.65

If the diameter varies, take several measurements, add them together and divide the amount by the number of measurement—the quotient will be the average diameter.

The following is contents of square cisterns:

	Bbls.		Bbls.
5 ft. x 5 ft. holds	5.92	8 ft. x 8 ft. holds	15.19
6 ft. x 6 ft. holds	8.54	9 ft. x 9 ft. holds	19.39
7 ft. x 7 ft. holds	11.63	10 ft. x 10 ft. holds	23.74

QUANTITY OF VARIOUS SEEDS PER ACRE.

Pounds Per Bu.	Seeds.	Quantity Per Acre.
60	Red Clover	8 to 10 lbs.
45	Timothy	¼ to ½ bushel.
14	Red Top	½ to 1 bushel.
14	Kentucky blue-grass	1½ to 2½ bushels
50	Hungarian grass	¼ to ½ bushel.
50	Millet	¼ to ¾ bushel.
45	Sugar cane seed	2 quarts.
56	Flax seed	1 to 3 bushels.
56	Corn	4 to 6 quarts.
56	Rye	1 to 2 bushels.
60	Wheat	1 to 2 bushels.
48	Barley	1½ to 2 bushels.
32	Oats	2 to 3 bushels.
52	Buckwheat	½ to ¾ bushel.
60	Potatoes	10 to 15 bushels.
55	Sweet potatoes	
.	Beets	4 to 10 pounds.
.	Carrots	2 to 3 pounds.
55	Turnips	1 lb.
.	Parsnips	2 to 3 lbs.
.	Onions	4 to 6 lbs.
60	White Beans	½ to 1 bushel.
60	Peas	1½ to 2½ bushels

The Necessity of Keeping Healthy Hogs.

The hog multiplies fast and matures quickly. When it is considered how important a factor the hog is in the production of wealth, is it not a little strange that the real scientific knowledge of hogs for raising and keeping them healthy is so little understood?

The hog brings more money to this nation from other nations than all the domestic animals put together; yet until Dr. Haas introduced his invaluable Remedy, the farmers and feeders of hogs were at the mercy of experimental and valueless remedies for swine diseases.

In the districts where his Remedy is universally used, swine disease has ceased to become epidemic and is always under full control.

WHAT HAAS' REMEDY WILL DO.

1. Put your hogs in first-class condition.
2. It will stop cough and regulate the bowels.
3. It is the only remedy known to relieve a hog when smut poisoned.
4. It will keep sows healthy during pregnancy, and superinduce a sound progeny.
5. It will *arrest disease* in every instance, if administered before the vital parts are beyond the reach of aid.
6. It will destroy worms.
7. It is a thorough preventive. Feeders who use it all the year round have no disease among their swine.
8. It will *repay its cost* many times over in the extra pounds of pork it will make without extra feed. Hogs treated with it will gain two or more pounds while others are gaining one. The reason of this is that it regulates the digestive functions and thereby enables the animal to convert every article of food eaten into pork, involving no waste.

WHAT HAAS' REMEDY WON'T DO.

1. It won't put new vitals into swine which were born only to premature death.
2. It won't cure swine which obtain the remedy upon the plan that the impecunious Irishman got drunk, viz., by absorption. Swine never absorb the remedy given to another hog.
3. It won't prevent and arrest disease in hogs that are given two cents worth when twenty-five or more cents worth are necessary.
4. It will not accomplish the results intended if the directions as to feeding it, and the sanitary and dietary instructions are neglected.
5. It will not save from death swine to whom it is administered after the vitals are *destroyed* by disease, nor prevent disease in those already diseased.

TO KEEP MILK SWEET.

Among the many methods adopted to preserve milk for a lengthened period, is that of M. Pasteur. He has found that if milk be heated to 212°, the boiling point of water, it will remain sweet for a few days; if heated to 220° (under pressure, of course), it will remain sweet for several weeks; but if heated to 250°, the milk will keep for any number of years.

REASONS WHY HAAS' HOG AND POULTRY REMEDY IS THE BEST.

1. Because it is counterfeited, and unscrupulous dealers endeavor to foist upon the farmer other preparations which are claimed to be "the same" or "better" than Haas' remedy, in order to secure larger profits than can be made on the genuine article. All counterfeits prove the value of the genuine article.

2. Because it not only arrests but prevents disease.

3. Because it not only arrests and prevents disease, but, by reason of its assimilative properties aiding digestion, it repays its cost with compound interest by putting on extra pounds of pork without extra feeding, enabling the farmer to market his hogs from one to two months earlier than without it.

4. Because when used according to directions it will tone the hog system, expel all poisons from the blood, aid digestion, and destroy worms, thus removing the prime causes of disease.

5. And when used according to directions to arrest disease, it will stop coughing and thumping in hogs, regulate the bowels, create an appetite and allay fever.

6. Dr. Haas is the only inventor and manufacturer of a remedy who offers to insure hogs against disease and put up sufficient money in bank to secure the farmer whose hogs he insures. He will insure all the hogs in a township or even a county. The larger the herd the better. Concerning the success of his remedy read the testimonials from nearly every Western State. Concerning his financial ability inquire of any banker at Indianapolis, Indiana.

WEATHER WISDOM.

The Farmers' Club of the American Institute, has

issued the following ten rules in relation to the weather, which farmers would do well to preserve for future reference:

1. When the temperature falls suddenly, there is a storm forming south of you.

2. When the temperature rises suddenly, there is a storm forming north of you.

3. The wind always blows from a region of fair weather toward a region where a storm is forming.

4. Cirrus clouds always move from a region where a storm is in progress to a region of fair weather.

5. Cumulous clouds always move from a region of fair weather to a region where a storm is forming.

6. When cirrus clouds are moving rapidly from the north or northwest, there will be rain inside of twenty-four hours, no matter how cold it is.

7. When cirrus clouds are moving rapidly from the south to the southeast, there will be a cold rain storm on the morrow, if it is summer; if it be winter, there will be a snow storm.

8. The wind blows almost in a circle around the storm, and when it blows from the north, the heaviest rain is east of you; if it blows from the south, the heaviest is west; if it blows from the east, the heaviest is south; if it blows from the west, the heaviest rain is north of you.

9. The wind never blows unless rain or snow is falling, within one thousand miles of you.

10. Whenever a heavy white frost occurs, a storm is forming within one thousand miles north or northwest of you.

WEIGHT PER BARREL OF DIFFERENT ARTICLES.

LEGAL OR BY USE.

	Lbs.		Lbs.
Flour	196	Soap	256
Boiled salt	280	Raisins	112
Beef	200	Anchovies	30
Pickled fish	200	Hydraulic cement	300
Pork	200	Lime	220

WHEN I SAY

I WILL INSURE YOUR HOGS

I MEAN WHAT I SAY AND SAY WHAT I MEAN.

BE NOT DECEIVED By worthless SUBSTITUTES claiming to be the same as the HAAS' REMEDY, some of which are enclosed in wrappers of same color and size and have same directions as on my well known packages.

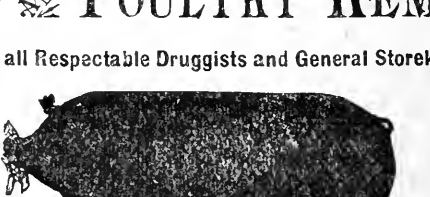
THE ONLY SCIENTIFIC SWINE REMEDY

IS

DR. JOS. HAAS'

HOG & POULTRY REMEDY

Sold by all Respectable Druggists and General Storekeepers.



(None Genuine except with this Trade Mark.)

Remember that I have always personally prepared my own remedies, and have never employed any one to perform that duty for me, all statements to the contrary notwithstanding.

This Remedy is the *first* and only one put upon the market which has successfully answered the question, "How can swine diseases be prevented and arrested?" It has stood the severest tests for nearly ten years. All so-called remedies, since put upon the market, claiming to be the same as mine, are feeble imitations

inspired by the success obtained by me, and are compounds containing neither merit nor medicine, and should be avoided as you would repel the advances of bunko-steerers or three-card-monte men. All the tests heretofore made with my Remedy were made under my personal supervision and at no time by peddlers formerly in my employ, none of whom are chemists or veterinary surgeons, notwithstanding their false claims of having made such tests.

READ MY PROPOSITIONS.

1. I will insure herds of not less than 100 hogs at so much per head conditioned that my Remedy is used under my personal direction, and pay the market price for all that die; in other words, I am ready at any time to forfeit money if my statements can not be substantiated by practical tests of my Remedy.

2. Where my expenses are paid, I will visit herds of not less than 100, and will arrest the disease among them or forfeit $500.

3. After hogs have been regulated by the Remedy, I guarantee that the annual cost of feeding it will not exceed 35 cents per head; furthermore that the increase of actual flesh will far more than pay for the Remedy used.

THE COST OF FEEDING THE REMEDY.

It costs to feed Haas' Remedy, as a preventive and arrester of disease, from twenty-five to fifty cents per hog during its lifetime, determined by the prevalence of disease in the neighborhood and the physical characteristics of the locality where they are fed.

NOTE.—Feeders too often make the mistake of waiting until their hogs are crippled by disease, and then rushing off to the drug store to purchase for a large number of hogs Remedy sufficient only for a few, and expect from small, irregular and insufficient doses, the result that can be obtained only by regular treatment. The result is failure, which is improperly charged against the Remedy instead of to false economy. A thorough trial, *strictly according to directions*, is respectfully solicited, and the result will be the same as recorded in the testimonials.

Don't wait until your hogs show unmistakable

signs of disease, and then try my Remedies on hogs which are past all redemption, but use my Remedies as a preventive with all your hogs, and its power to prevent those unafflicted from contagion, although herding with the sick hogs, will be fully demonstrated. Immediately a hog indicates disease, feed it the Remedy as directed in that case, and you will test its power as an arrester of disease.

PRICES:—50c., $1.25 and $2.50 per box, according to size. 25 pound cans, $12.50. Full directions in each box. The larger sized packages are the cheapest.

If your druggist or general store doesn't keep my medicines, or urges you to purchase cheaper and consequently inferior substitutes, send remittance direct to me and I will fill your order, but I prefer that you should procure it of your druggist or dealer.

JOS. HAAS, V. S.,
Indianapolis, Ind.

SIZE TO MAKE BOXES FOR CERTAIN MEASURES.

A box 20 inches square, and $16\frac{1}{8}$ inches deep, will contain one barrel (3 bushels).

A box 15 inches square, and $14\frac{1}{3}$ inches deep, will contain half a barrel.

A box 17 inches by 14 inches, and 9 inches deep, will contain one bushel.

A box 10 inches by 12 inches, and 9 inches deep, will contain half a bushel.

A box 8 inches square, and $8\frac{3}{8}$ inches deep, will contain one peck.

A box 8 inches square, and $4\frac{3}{16}$ inches deep, will contain 1 gallon (dry)$=\frac{1}{8}$ bushel$=268\frac{3}{4}$ cubic inches.

A box 4 inches square, and $4\frac{3}{32}$ inches deep, will contain 1 quart.

The following

TESTIMONIALS

From all parts of the Union are indiscriminately selected from letters sent by farmers, feeders, breeders and druggists selling the Haas Remedies. They are ar-

ranged by States so that the reader can satisfy himself with little or no trouble by writing or visiting the subscribers.

ARKANSAS.

FAYETTEVILLE, ARK., Feb'y 5, 1885.

Send us at once another $50 lot of H. and P. Remedy.

GREGG & SMITH.

COLORADO.

FORT COLLINS, COL., January 13, 1885.

Your package of Hog Remedy came to hand all safe, and have been using it. Have not lost any hogs. The hogs are dying around here. Enclosed find draft for $12.50. Please send the worth of same in your Hog Remedy, and ship by express. Very truly yours, N. C. ALFORD.

WEISSPORT, COL., April 17, 1885.

Please send me another box of your Poultry Remedy. It is the best preventive I can get. I have used it for three years; it keeps my chickens healthy. C. E. CORNU.

INDIANA.

SHELBYVILLE, IND., March 9, 1885.

Please ship us by freight $100 worth of your Hog Remedy as described in following order. McCREA & BISHOP.

"As soon neglect feeding their natural food."

I have used your Remedies for more than six years. I have found them to do more than you stated they would do, and I would as soon neglect feeding my hogs their natural food as to deprive them of your Hog and Poultry Remedy as a preventive and fattener. JACOB M. HARSHBARGER.

CRAWFORDSVILLE, IND.

"Never lost a hog."

BEECH GROVE, IND., July 25, 1884.

I have fed Dr. Jos. Haas' Hog and Poultry Remedy to my herd of hogs continuously for the past seven years, and have never lost a hog; and the amount of pork has been very much larger than when I did not feed the Remedy. I would not be without it. JOHN T. WHEATLEY.

"Since using as a preventive have not lost a hog."

W. A. Maze, of Sharpesville, Ind., writes: I have been breeding pure Berkshire and Yorkshire hogs for twenty years; have lost heavily from hog cholera. In the fall of 1879, I lost 79 out of 87 fine Berkshires with that terrible plague. Since then I have been using your Remedy as a preventive, and have not lost any, while my neighbors' hogs have had it and died more or less every year. Your Remedy as a preventive can not be recommended too highly.

DENVER, IND., March 2, 1885.

Sir—Your goods have given good satisfaction in this neighborhood. Our druggist has sold some of it to my neighbors, and they think it a good thing. Yours with respect,

W. W. KIRBY,
of Kirby & Zook, Breeders.

TERRE HAUTE, IND., Jan. 22, 1885.
Please ship me enclosed ($100) order for Hog and Poultry Remedy
J. A. FOOTE.

ILLINOIS.

CANTON, ILL., Oct. 11, 1880.
Dr. Jos. Haas' Swine Remedy has been successfully used in this neighborhood on different herds of hogs for preventing and arresting swine disease, known as cholera. Where I know of it being used it has given entire satisfaction. The parties using it claim that it did more than it was recommended to do.
A. C. MOORE.
[Mr. Moore is one of the best known breeders in the U. S.]

Shepard & Alexander, of Charleston, Ill., write to the *Indiana Farmer* as follows: We ordered some of Dr. Jos. Haas' Hog Medicine through you for some of our neighbors whose hogs were dying very rapidly. None died after taking the Remedy. We can cheerfully recommend it as a preventive. We think it has no equal. Every farmer who raises hogs ought to use it.
SHEPARD & ALEXANDER.

"Will Put Hogs in Condition in the Shortest Time of Any Medicine We Ever Used."

B. F. Dorsey & Sons, Perry, Ill., say: We have been an exhibitor at the fairs for twenty-nine years, and have used many kinds of medicine for appetizing and putting hogs in show condition, but the Haas Medicine will put hogs in condition in the shortest time of any medicine we ever used. It is the best appetizer for hogs we ever used at any time. Since using this Remedy we have had no cholera nor any symptoms of swine disease, and it is our opinion after six years' trial that it is a good medicine.

"Always Proved Satisfactory."

STREATOR, ILL., Oct. 10, 1884.
Your Medicine has always proved itself satisfactory in every respect, and I shall continue to give you my exclusive patronage.
MILFORD CRAFT.

STRAWN, ILL., September 23, 1884.
Hogs are dying fast all around us, but parties who have kept using your Remedy seem to ward it off.
I am, yours, etc.,
W. H. OXLEY.

HENRY, ILL., May 8, 1885.
Please send us by U. S. Express $25.00 worth of your Remedy, most all in $2.50 packages. Please *rush* this. Your Remedy gives good satisfaction.
J. E. & F. A. POWELL.

CANTON, ILL., January 9, 1885.
Please send us another $50 lot of your Hog Remedy. It gives good satisfaction, and we will do all in our power to push it.
ROSS & RUBLE.

WYOMING, ILL., April 3, 1885.

Your "Hog Remedy" we think a good thing, having used some of it.

W. SCOTT & SON.

STRAWN, ILL., September 26, 1884.

* * * Hogs dying all around me. I have kept 160 all right with your Remedy. Please send me a 25-pound can. Am. Ex.

J. H. CURYEA.

ST. ELMO, ILL., September 9, 1884.

Please send me by express a lot of your Hog Remedy. I have fed the Remedy personally and find it good.

F. M. FOLGER.

LOMAX, ILL., October 14, 1884.

I wish you to send me one more can for my own use. All I have used and all I have sold has given good satisfaction. I have known of it arresting disease in three days. One man came to me and wanted me to insure a cure. I gave him six pounds and directed him how to use it. I told him if he thought it did any good to pay me, if not I would give it to him. In four days afterward he came and wanted me to order one can for him. I did so in my last order. He says it helped his hogs from the first feed of it. It has been used very successfully in five herds close by here.

CHAS. VAUGHN.

[*Later.*]

LOMAX, ILL., November 3, 1884.

My herd of hogs look fine and doing well by the liberal use of your Remedy. Stockmen are coming miles to see my herd and get a quantity of the Remedy, and all think it a good thing.

CHAS. VAUGHN.

CHAMPAIGN, ILL., March 6, 1885.

DEAR SIR—The cholera is among a number of droves of hogs in this county. I have suggested your Remedy to a number of farmers. I am a shipper, and feel considerable interest in having the disease stopped. I will do what I can in introducing it. I am, respectfully, yours,

GEO. W. DAVIDSON,
Live Stock Shipper.

ABINGDON, ILL., March 12, 1885.

DEAR SIR—Inclosed please find amount of last bill. Your Hog Remedy is gaining friends and giving good satisfaction.

Truly yours, F. P. FOLTZ.

FERRIS, ILL., May 26, 1885.

My trade is increasing in your Remedy.

K. S. HOLT.

EL DARO, ILL., June 12, 1885.

I got two packages of your Remedy about one year ago. It gave good satisfaction. What is your price now?

S. G. KENDRICK.

ATKINSON, ILL., January 5, 1885.

Please send us $20 worth of your Hog Remedy. Everybody wonders what makes our own hogs look so slick. We tell them it is using your Remedy two or three times a week to our well hogs. It has induced them to try it, and some are getting convinced that it is what does it.

JACKSON & CO.

IOWA.

INDIANOLA, IA., October 31, 1884.

Send me as much of your *invaluable Remedy* as possible for $75. I have about 200 hogs in my care. I do not propose to wait until they are diseased unless something should develop before you can fill this order. Send as soon as possible.

JOHN GOSLING, Superintendent
Swan, Bosler Land and Cattle Co.

YORKTOWN, IA., November 7, 1884.

Please send us 25 pounds of your hog medicine. Send soon as possible, as the parties are waiting on it. We have other remedies but they want yours.

Yours very respectfully,
SCALES & ERNST.

IOWA FALLS, IA., March 19. 1885.

The Remedy is doing good work this winter—about every farmer has had sick hogs—but Dr. Haas' Hog Remedy, brings them out all O. K.

JOHN L. SWARTZ.

ST, LUCAS, IA.

Enclosed find order for $30 worth of your Remedy. The remedy gives perfect satisfaction. I have the first case of failure to hear from.

THEO. PERRY.

DAYTON, IA., March 30, 1885.

I have used your hog powders for hogs and poultry. I like it very much. I was prevailed upon to try an imitation of yours. I don't like it. I want 10 pounds of your powders. Where shall I get it.

CHAS. MENCHAM.

BOONE, IA., October 29, 1884.

I have used your Remedy with very satisfactory results.

WILLIAM BECKETT

ODEBOLT, IA., December 2, 1884.

The can of medicine came to hand in due time and I have fed as directed and my hogs are all right. The disease is now on two sides of me. Please send me two more cans by return express. I propose to stick to your Remedy. Shall not allow myself to get out.

J. A. BARE.

GOSHEN, IA., December 11, 1884.

Enclosed find $30 for Hog Remedy. Send by express.

Yours respectfully,
HORACE BLISS.

BRADGATE, IA., November 3, 1884.

We have had more than ten applications for the Remedy since we introduced it here. Send at once.

THOS. HOLLIS, & Co.

CRESTON, IA.

We to-day send you copy of paper containing ad. We have ad. in both *daily* and *weekly*. Medicine selling *very fast*.

ARNOLD BROS.

BEAMAN, IA., October 18, 1885.

Please send me by American Express Co., two 25-pound cans Haas' Hog and Poultry Remedy. They all want the Haas Remedy here, so I will handle no other.

JAS. K. BOWMAN.

VINTON, IA.

I had seventy-six hogs, all diseased, appetite gone, and gaining nothing with the best of feed and comfortable quarters. A number had already died, and five were thumping when I commenced using Dr. Haas' Hog Remedy. Their appetites increased more than one-half in ten days. They stopped dying at once, and began growing from that time. They were all constipated, but are now all regular and doing well.

J. T. MCWHORTER.

"All That is Claimed for It."

CRAWFORDSVILLE, IA., September 30, 1884.

This is to certify that I have fed the Haas Hog and Poultry Remedy for the past two years, and I can recommend it to be all that is claimed for it, if fed right along.

J. B. CROOKS.

STRATFORD, IA., June 24, 1885.

For the past six months I have been using your Hog Remedy, and I can say by my own experience that it is the best thing I have ever seen. My hogs are thriving so well that my neighbors are wondering about it. I shall never be without it as long as I can get it.

IRVIN ERICKSON.

The loss in Nebraska during the last year has been for the first time very heavy. Reports from 46 of the 73 counties show that out of 1,302,675 head of swine, 460,463 were affected with the disease, and 352,921, valued at $2,445,778, died.

KANSAS.

CORONADO STOCK FARM, CLAY CENTER, KAN., June 4, 1885.

To the Editor Journal.—Dear Sir: In January, 1885, after the death by disease of two large Berkshires, either of which would weigh from 400 to 500 pounds, I gave to the balance of the herd in same yard (about 100 in number) a thorough course of treatment with Haas' Hog Remedy, according to the printed directions. None of these hogs have ever since shown any symptoms of disease. One car load of them topped the Kansas City market in February last, the remainder I still have. I have kept Haas' Remedy on hand for the past two years, and so long as it continues to do what it has done for my hogs I ask for no better.

M. M. MILLER.

OAK HILL STOCK FARM, CLAY CO., KAN., June 3, 1885.

Editor Drovers Journal: I had diseases among my hogs in the month of February, 1885. I had lost ten and was then recommended the Haas' Hog Remedy, and commenced using it. After using the Remedy three days I never lost another hog, and am fully satisfied the Remedy did the work.

JOHN LYNE.

BROOKVILLE, KAN., Nov. 26, 1884.

Please to forward by express, 25-pound can of your Hog Remedy.

M. S. CROWLEY,
Proprietor Brookville Mills.

CLAY CENTER, KAN., Nov. 7, 1884.

Yours received and contents noted. We sell now three times as much as we have heretofore. We have had very little disease among hogs here since we first took the Remedy. The Haas' Remedy is still on the boom.

SHARPE & CO.

CHEROKEE, KAN., Feb. 3, 1885.

Please ship me another $40 lot of your Remedy. I find an increasing demand since the parties have found out it can be obtained at the price now sold, as where I have sold it parties speak of it in the highest terms.

W. F. HAINER.

KENTUCKY.

CAMP NELSON, KY., Jan. 2, 1885.

Please send us another $35 bill just as you did before. We are about out, and don't want the hogs to be without it. Send at once.

SCOTT & BRYANT.

AUBURN, KY., Sept. 29, 1884.

Dear Sir—Please send me by first express a lot of your Hog Cholera Remedy. Yours is a good remedy and gives satisfaction.

D. Y. WINSTON.

NICHOLASVILLE, KY., Nov. 1, 1884.

Please ship me by express $40 lot of Hog and Poultry Remedy as described below.

JEFFERSON OXLEY.

MARYLAND.

BREATHEDSVILLE, WASHINGTON CO., MD.,
September 26, 1884.

One of my neighbors, Mr. Gera. South, is at my house, and his hogs at home sick. I am sorry I haven't powders on hand to spare for him to feed. Send him a twenty-five-pound can to Hagerstown, Md., as soon as possible.

EZRA BURTNER.

EASTON, MD., Dec. 29, 1884.

Two of my friends came to me and want to get some of your powders. Enclosed find $12.50 for a twenty-five-pound can. Please send by express at once.

D. G. BARBER.

EASTON, MD., Nov. 13, 1884.

Your Cholera Remedy has been tried, and I now regret not having ordered larger quantity. It has stopped the fattening hogs dying, and improved their appetite. Enclosed find $12.50. Please forward at once by Ad. Ex.

F. C. GOLDSBOROUGH.

EASTON, MD., Feb. 18, 1885.

We enclose order for $20 worth of Remedy at the suggestion of D. C. Barber, who has used the Remedy with success.

DAWSON & JENKINS.

MINNESOTA.

MINNEAPOLIS, MINN., Feb. 28, 1885.

We have just received a circular from a competitor of yours. We also notice there are several other parties putting up hog cholera cures. We shall stand by your Remedy, and will do all we can to discourage the use of the bogus remedies for we deem it a very disreputable business for any man to infringe on the trade of a proprietary medicine.

Yours, resp'ly, CROSSMAN & PLUMMER.

MISSOURI.

WALKER, MO., Feb. 16, 1885.

About two months ago the cholera broke out in my herd of hogs, and within one week my loss was between $600 and $700. I purchased some of Haas' Hog and Poultry Remedy, and after using it once my hogs commenced getting better, and within three days stopped dying and commenced improving.

I consider it worth the cost as a preventive, and also consider it a sure cure and do not intend to be without it.

M. D. JOHNSON.

LA PLATA, MO., Oct. 27, 1880.

Our hogs were sick and dying; bought a package of Jos. Haas' Hog Remedy; it arrested the disease immediately. Since using it our hogs have regained their appetites and all symptoms of disease have disappeared. They are fattening faster than any hogs we ever had the same length of time. It is a success and we cheerfully testify to same.

Very truly, GRIFFIN & BRO.

"It Saved Me From $800 to $1,000."

HANNIBAL, MO., June 20, 1884.

I have used Dr. Jos. Haas' Hog Remedy and can recommend it as a sure cure for hog cholera. I lost eight hundred dollars ($800) worth of hogs last spring out of a herd of over 300 head. I began feeding the remedy while they were dying at the rate of two or three a day, and from the first day of feeding the Haas Remedy *I have not lost a hog*; in fact, they have improved right along, and it has only cost me $27.50, and I am sure it has saved me from $800 to $1,000.

FRANK LEE.

MACON, MO., April 8, 1885.

We are having a nice trade on your goods.

WILLIAMS & WOOLDRIDGE.

LOUISVILLE, MO., May 26, 1885.

Dear Sir—We order $60 worth of your H and P. Remedy this morning. There is considerable cholera now among leading farmers herds. We have sold it in dozen instances, no cure, no pay, and have never lost a cent. We have received several testimonials from good men. It has never failed.

BROWN & WELLS.

PHELPS CITY, MO., Dec. 2, 1884.
Ship me four 25-lb. cans Hog Remedy. Am selling the Remedy rapidly, and it is saving many hogs. Some farmers, apparently through prejudice, refuse to use the Remedy and are losing all their hogs. E. J. WADE.

KNOX CITY, MO., Oct. 11, 1884.
Please send $10 worth of your Hog Medicine. I have used your medicine for several years. F. WOLTER.

MARYVILLE, MO., February 3, 1885.
Please send of your Hog and Poultry Remedy $40 worth, or duplicate my last order. S. C. MCCLUSKEY.

NEBRASKA.

WILLOW SPRINGS DISTILLERY, OMAHA, NEB., NOV. 4, 1882.
We had 1,220 hogs in our barns, some of them showing unmistakable signs of the disease known as hog cholera. Following were the symptoms exhibited: Dull, drooping appearance, thumps, blind staggers, use of hind quarters partially gone, and a dry, staring coat. We purchased $300 worth of Haas' Remedy; fed it according to directions, carefully observing all sanitary precautions. Some hogs died, but as soon as they were under the influence of the Haas Remedy, they ceased dying from the malady and general thriftiness set in. Their appearance and weight continued to improve until date of shipment. 250 head were in the barns 44 days. 400 head, 70 days, and the balance, 80 days. Their gain in weight and quality was highly satisfactory. Knowing that these splendid results were due to the Haas Remedy, we wish to make the record public, believing that others interested in the hog will be vastly benefited by making use of this Remedy. D. E. ILER,
President Willow Springs Distilling Co.

MILFORD, NEB., January 10, 1885.
Your Remedy seems to give satisfaction. We used some in bulk for large feeders. You may send three cans with directions. A. W. FUNK & Co.

YORK, NEB., February 25, 1885.
Please send us six cans of your Remedy as soon as possible.
JEROME BROS.

YORK, NEB., March 21, 1885.
Please send six more cans as soon as possible.
JEROME BROS.

[The last above was the sixth order received from Jerome Bros. within three months, and speaks well for the popularity of the Remedy in their neighborhood.]

"The half has never been told."

Have arrested the cholera in the SICKEST LOT OF HOGS I have ever seen by the use of Haas' Hog Cholera Remedy, and in my experience liberally indorse it as being a good honest medicine, of which the half has never been told.
J. M. GARDNER,
York, Nebraska.

"Saved me $3,000."

In January, 1885, hog disease attacked my herd in the most malignant manner, but by the prompt use, according to directions, of Haas' Hog Remedy, the disease was arrested with only a trifling loss. In my experience the Remedy is worth the price of it in the increased amount of pork which its use produces, and the general thriftiness of the herd which follows its use. I consider that my entire herd was saved from the ravages of the hog disease by the use of the Remedy. HON. CHAS. KECKLEY,
York, Nebraska.

GRAND ISLAND, NEB., Oct. 15, 1884.
Please send by express one can containing 25 pounds of your Hog Cholera Remedy. R. R. ALTER.

CEDAR CREEK, NEB., Feb. 28, 1885.
Enclosed find draft for $25. Send me fifty pounds of your Hog Remedy. JAS. G. ALLISON.

RED CLOUD, NEB., Nov. 6, 1884.
Please send me $50 worth of your Hog Remedy.
W. N. RICHARDSON, Dealer in live stock.

ITHACA, NEB., July 19, 1884.
Hogs doing well now since we got your Remedy, and some of our neighbors want the Remedy.
J. F. ROLL & Co.

WESTERN, NEB., Dec. 30, 1884.
Your Remedy is successful in this part of the country. Please send me $30 lot by express. JOHN F. BARTOS.

NEW HAMPSHIRE.

SUNCOOK, N. H., January 13, 1885.
Send me $5 worth of your Hog Remedy. Would like it for my own use. J. G. BARTLETT.

OHIO.

ADA, O., April 13, 1885.
I have had offers to handle other goods but propose to stay with your Remedy as long as goods give satisfaction as they have in the past. J. N. MAHAN.

ST. PARIS, O., September 6, 1884.
We are getting your medicine introduced. It has *never failed* to arrest the disease yet. We have had it put to the severest tests but it always cured. We expect to continue to sell. JONES & MUSSELMAN.

DENT, O., December 22, 1884.
I have used your Remedy for my chickens and I want some more. JOHN W. MILLER.

OXFORD, Butler County, O.
I have used Dr. Haas' Hog Remedy with excellent results. Having thoroughly tested it, I know it is a success.
JAS. MURPHY.

PENNSYLVANIA.

"Would not Risk Feeding a Pen of Hogs without the Remedy."

GIBSONTON, WESTMORELAND CO., PA., Feb. 2, 1885.

About a year ago our herd here numbered about 2,700 head. Disease broke out, and no remedy we had would arrest the trouble. Our losses were heavy, and we had to give up feeding altogether for about three months. We then heard of your Remedy, and bought a trial lot and began feeding again. We have used it constantly ever since. We have, since April last, received into our herd about 5,000 head of hogs, and have not had a single death from swine disease. This is our experience. Our opinion is that the Remedy has prevented disease, and we would not think of being without it. As an aid in fattening pork we believe it to be good. On this point, however, we have not made an actual test, as we would not risk feeding a pen of hogs without the Remedy. Yours very truly,

WHITE & CO.

TENNESSEE.

PARIS, TENN., March 19, 1885.

I use your hog medicine, and am well pleased with its effects upon my stock. P. D. T. ROBERTS.

WISCONSIN.

J. M. Ellsworth, of Martinsville, Wis., says: "I have used your Remedy and have seen it tried on a number of herds with great satisfaction. It will do all you claim for it, and I would not think of raising hogs without it."

Haas' Hog Remedy Sent for from England.

It is gratifying to learn that the advertisement of Dr. Jos. Haas' Hog and Poultry Remedy, which appears on our last page, was seen by a prominent swine breeder in England, and resulted in his sending an order this week for a quantity of the Remedy inclosing with his order a draft for the amount of the bill. The gentleman inquired from several breeders on this side their opinion of the Remedy and was informed that their experience with it proved it to be not only a preventive and arrester of disease, but worth many times its value as a pork producer.

This instances, first, the value of the *Indiana Farmer* as an advertising medium, and second, the advantage to the advertiser who possesses the secret of manufacturing an article, the great value of which is sounded abroad by his patrons as a duty they owe to their fellows and in gratitude to the man whose discovery has been the means of saving and making money for them.—*Indiana Farmer, June 13, 1885.*

DR. JOS. HAAS'
LIVE STOCK REMEDIES.

SOLD BY ALL DRUGGISTS AND STOREKEEPERS.

BEWARE OF COUNTERFEITS.

None Genuine without this Trade Mark.

These remedies are indispensable to stockmen, farmers and horsemen. You can not only save but make money by keeping them for use by your stock, as the fine condition they will put them in will enhance their value many times more than the cost of the remedies. It is cheaper to enjoy protection from disease for one year than to run the risk of loss for one day. Money is saved by using them. Money is made by using them. They will improve your horses and cattle. They will increase the flesh on your cattle. They will prevent all diseases of animals. They will cure when used in the early stages of disease.

Remember prevention is better than cure, and that domestic animals, unlike the human family, can not make known their ailments, therefore the only safe rule is to use such measures as will promote digestion, assimilate the food and purify the blood. Don't delay to procure them until your animals are suffering, but keep a supply always on hand.

These remedies have enjoyed for several years a reputation among the leading stock raisers of the country, of being

Offered to the public. In contrast with other preparations, which are manufactured by adventurers, who hardly know the difference between the head and hoof of an animal, these remedies are manufactured by a graduated veterinary surgeon, who before putting them on the market thoroughly tested their usefulness in his private practice. These remedies are guaranteed to give satisfaction.

Jos. Haas, V. S.,
56 South Pennsylvania Street,
INDIANAPOLIS, IND.

HAAS' ALTERATIVE OR CONDITION POWDER

Nature's Restorative—Guaranteed to be the Best Condition Powder Manufactured—The Best Preventive of Diseases of the Blood and Contagious Diseases—No Stable Complete Without It.

It will tone the stomach, assist digestion, regulate the bowels, throw off all poisons from the blood, destroy parasites, and regenerate the system. It will loosen the hide, the staring coat will become slick and glossy; it will infuse new life into the gait, the head will become erect, the eyes clear and bright, and the thorough regeneration will be gratifying to both owner and animal. The strong peptic proportions of my ALTERATIVE will prevent the fermentation of food in the stomach, therefore all flatulence and disposition to colic, and inflammation of the stomach and bowels may be avoided by its use. All acid conditions of the bowels, dysentery, constipation, etc., will be promptly relieved by it if given according to directions. It will prevent engorgement of the liver, and regulate the biliary organs; its diuretic and alterative properties will correct all derangements of the urinary organs, and will prevent inflammation or congestion of the kidneys, diabetes, etc., etc.

Be warned in time by such symptoms as dribbling urine, ineffectual efforts to stool, too frequent stalling, profuse sweating, excessive thirst, and urine clear and watery, weakness in the lions and hind legs, etc.,

etc. HAAS'S ALTERATIVE will purify the blood and prevent all blood diseases and eruptions; your animals are constantly exposed to such blood poisons, as they may be taken up in food and drink, absorbed into the system from impure air, contagious diseases, and overcrowded barns, imperfect ventilation, etc., etc., and my ALTERATIVE being an antidote to such poisons, it should be frequently used by all horsemen. Animals enervated and worked down can be restored to a normal condition by giving it faithfully.

It may be used for mules and cattle with equal success.

Price, per box, small size, 25 cents; large size, 50 cents. Directions in every box.

HAAS' EPIZOOTIC REMEDY.

Famous for Preventing and Curing Distemper, Epizootic, Pink Eye, Influenza, Pneumonia, Coughs, Colds and Catarrh.

There are no diseases common to horses that will destroy their value and usefulness more than distemper, epizooty, pink-eye and relative diseases, and where this valuable specific is used in time, it will afford absolute protection from the danger and loss of services occasioned by these periodic diseases. This remedy is as useful to horses as quinine is to the human race. It has no equal in preventing and curing the above diseases and those attributable to blood poisoning. It will ward off dropsy, rheumatism, diabetes, inflammation of the kidneys and all kidney complaints, and horses who have experienced its kindly effects emerge from their diseases in fine condition and with a glossy coat. This remedy has never failed in any instance.

Price, $1.00 per box. Directions in every box.

HAAS' COLIC REMEDY.

The only known cure for Bots, Spasmodic Colic and Gastritis The most effective Preventive of Enteritis or Inflammation of the Bowels.

This remedy if used promptly will save the life of a valuable animal and the owner hundreds of dollars. Animals with a predisposition to colic, may have this habit of nature counteracted and entirely removed by using the remedy as an anti-periodic.

The diseases for which this is a specific are more

prevalent during the grass season and when feeding new grain. If used as a preventive upon indications of colic or bots, the most serious consequences can be avoided, and being a powerful anodyne is an antidote for pains of all kinds in the stomach and bowels.

Price, $1.00 per box. Directions in every box.

HAAS' CATTLE REMEDY.

Prevents Pleuro-Pneumonia, Black Leg or Quarter Ill, Bloody Murrain, Milk Fever and Inflammation of the Udder.

It is in use among the best herds of the country, and its eminent success is sufficient guarantee of its genuine merits. Prudence must suggest its use in all herds of value, as it is not only the best known preventive of disease, but, being a great appetizer and aid to digestion, it will far more than PAY ITS COST in the extra pounds of beef which it will produce, and in feed saved to effect such result.

It will prevent pasture poisons, and being an antidote to the secaline poison of ergot, it will ward off abortion, its evil consequence. This is a danger to which all cattle are exposed, as blasted or "smut" grains and fodder are liable to be fed by the most judicious feeders. On low grounds, during damp seasons, the danger is greatly increased, and the evil results are not only abortion, but gangrene of the extremities, and final decomposition and death. If used during gestation it will prevent retention of the placenta, and should be used in all cases of puerperal fever and mammites, or inflammation of the udder. It will increase the flow of milk and prevent milk fever, and is therefore an invaluable adjunct of the dairy.

It will ward off Pleuro-Pneumonia, Black Leg or Quarter Ill, Bloody Murrain, and kindred diseases of the blood. Being a strong food assimilative, it will remove all obstructions to a normal digestion. Scours, constipation, depraved appetite, dyspepsia, hoven or tympanitis, and any predisposition to the sequelæ of indigestion may be avoided by its use. If the system is debilitated, the vital functions lowered in tone, the coat staring, the skin dry and harsh, make free use of it, and avoid the inevitable consequences of such symptoms.

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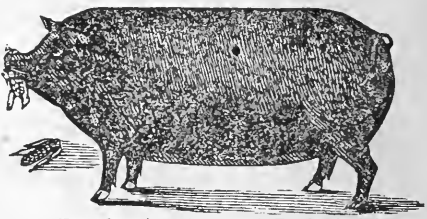

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